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ROYAL ASIATIC SOCIETY

[No. 37]

JOURNAL

January, 1902

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THE

STRAITS BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

COUNCIL FOR 1902.

The Right Rev. Bishop Hose, *President.*

Hon. W. R. Collyer, *Vice-President for Singapore.*

Dr. Brown, *Vice-President for Penang.*

H. N. Ridley, Esq., *Honorary Secretary.*

Dr. Hanitsch, *Honorary Treasurer.*

H. Eschke, Esq.,
A. W. O'Sullivan, Esq.,
A. Knight, Esq., } *Councillors.*
Lim Boon Keng, Esq.,
P. J. Burgess, Esq.,

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Banks, J. E.	U. S. A. Life Member.
Barker, Dr. A. J. G.	Sarawak.
Barnard, B. H. F.	Selangor.
Barnes, W. D.	Penang.
Bicknell, W. A.	Penang.
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Birch, Hon. J. K.	Penang.
Bishop, J. E.	Pekan, Pahang.
Blagden, C. O. m.a.,	London, England. Life M'ber.
Bland, Hon. R. N.	Malacca.
Bourke, H. Walter.	Puket, Siam. Life Member.
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Brockman, E. L.	Singapore.
Brown, Hon. Dr. W. C.	Penang.
Bryant, A. T.	Penang.
Buckley, C. B.	Singapore.
Burgess, P. J.	Singapore.
Butler, A. L.	Kartoum, Egypt.

Camus, M. de	Singapore.
Cerruti, G. B.	Tapah, Perak.
Clifford, H. C., c.m.g.	Pahang.
Collyer, Hon. W. R.	Singapore.
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DICKSON, E. A.	Kwala Langat, Selangor.
DRIVER, JAMES	Kwala Lumpor, Selangor.
DUNKERLEY, Rev. W. H. C., M.A.	Singapore.

EDGAR, Dr. P. G.	Ipoh, Perak.
EDMONDS, R. C.	Jugra, Selangor.
EGERTON, WALTER, C.M.G.	Penang.
ELCUM, J. B.	Singapore.
ESCHKE, H. H.	Singapore.
EVERETT, H. H.	Santubong, Sarawak.

FLEMING, T. C.	Pekan, Pahang.
FLOWER, S. S.	Cairo, Egypt. Life Member.
FORT, HUGH	Singapore.
FREER, Dr. G. D.	Penang.

GERINI, Lt. Col. G. E.	Siam. Life Member.
GOMES, Rev. EDWIN	Sarawak.
GRAHAM, JAMES	Scotland.

HAFFENDEN, JOHN	Singapore.
HAINES, Rev. F. W.	Penang.
HALE, A.	Kent, England.
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HELLIER, MAURICE	Singapore.
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HILL, Hon. E. C.	Singapore.
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HOSE, E. S.	Taiping, Perak.
HOYNCK van PAPENDRECHT, P. C.	Rotterdam, Holland.
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JOAQUIM, J. P., F.R.G.S.	Singapore.
JOHNSTON, L. A. M.	Butterworth, P. W.

Kehding, Dr.	Germany.
Ker, J. Campbell	Johore Bahru.
Kloss, C. Boden	Singapore.
Knight, Arthur	Singapore.
Knocker, Fred. W.	Ulu Beranang, Negri Sembilan.
Kynnersley, Hon. C. W. S., C.M.G.	Penang.
Laidlaw, G. M.	Taiping, Perak.
Lawes, Rev. W. G.	Port Moresby, N. Guinea. Hon. M'ber.
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Lemon, A. H.	Penang.
Lermit, A. W.	Singapore.
Lewis, J. E. A., B.A.	Sarawak.
Lim Boon Keng, Hon. Dr.	Singapore.
Luering, Rev. Dr. H. L. E.	Ipoh, Perak.
Lyons, Rev. Ernest	Singapore.
Machado, A. D.	Batu Pahat, Johore.
Maclaren, J. W. B.	Singapore.
Marriott, H.	Singapore.
Mason, J. S.	Raub, Pahang.
McCausland, C. F.	Kwala Lumpor, Selangor.
Meldrum, Dato James.	Johore.
Merewether, E. M.	Malta.
Nanson, W., B.A., F.S.A.	Singapore.
Napier, Hon. W. J., D.C.L.	Singapore.
Norman, Henry	Kwala Lipis, Pahang.
O'Sullivan, A. W. S.	Singapore.
Pears, Francis	Muar.
Perak Government Museum	Taiping, Perak.
Perham, The Ven'ble Archdeacon	England. Hon. Member.
Pustau, R. von	Singapore.
Rankin, H. F.	Amoy.
Ridley, H. N., M.A., F.L.S.	Singapore.
Roberts, J. A., M.A.	Singapore.

Roberts, B. G.	North Raub, Pahang.
Rodger, J. P., C.M.G.	Taiping, Perak.
Rostados, E.	Bundi, Trengganu.
Rowland, W. R.	Negri Sembilan.
Sarawak, H. H. The Rajah of, G.C.M.G.	Sarawak. Hon. M'ber.
Sarawak, H. H. The Ranee of Sarawak.	
Satow, Sir E. M., K.C.M.G.	Peking, China. Hon. Member.
Saunders, C. J.	Singapore.
Seah Liang Seah	Singapore.
Seah Song Seah	Singapore.
Shelford, R.	Sarawak.
Shelford, W. H.	Singapore.
Shellabear, Rev. W. G.	Singapore.
Skeat, W. W.	London.
Smith, Sir Cecil C., G.C.M.G.	London. Hon. Member.
Sohst, Theo.	Singapore.
St. Clair, W. G.	Singapore.
Stringer, Hon. Charles	Singapore.
Sugars, J. C.	Telok Anson, Perak.
Tatlock, J. H.	Ipoh, Perak.
Van Beuningen von Helsdinger, Dr. R.	Tandjong Pandan, Billiton.
Vermont, Hon. J. M., C.M.G.	Province Wellesley.
Walker, Lt. Col. R. S. F., C.M.G.	Kwala Lumpor, Selangor.
Walter, W. G. C.	Klang, Selangor.
Waterstradt, J.	Ternate, Dutch East Indies.
Watkins, A. J. W.	Kwala Lumpor, Selangor.
West, Rev. Benj. Franklin	Singapore.
Wickett, Fred., M.I.C.E.	Lahat, Perak.
Wise, D. H.	Pekan, Pahang.
Wood, C. G.	Batu Gajah, Perak.

PROCEEDINGS

of the

Annual General Meeting

The Annual General Meeting of the Royal Asiatic Society was held on the 12th of February, 1902.

There were present:—Right Reverend BISHOP HOSE, Hon'ble C. W. S. KYNNERSLEY, Rev. W. H. C. DUNKERLEY, Rev. W. G. SHELLABEAR, Rev. Dr. B. F. WEST, Messrs. A. W. O'SULLIVAN, H. H. ESCHKE, LIM BOON KENG, C. J. SAUNDERS, A. KNIGHT, M. HELLIER, P. J. BURGESS.

The minutes of the last meeting were read and confirmed.

The Right Reverend BISHOP HOSE proposed that His Excellency SIR FRANK SWETTENHAM should be elected Patron of the Society. This was seconded by the Hon. C. W. S. KYNNERSLEY and carried unanimously.

The elections of members who had joined the Society during the previous year were confirmed.

The Annual Report of the Council was read and its adoption carried, on the proposition of Mr. H. Eschke seconded by Mr. Saunders.

The Treasurer's Report audited by Mr. Knight was read, and the Rev. W. H. C. Dunkerley proposed its adoption, which was seconded by Mr. A. W. O'Sullivan and carried.

Mr. Shellabear proposed that the Council be requested to take steps during the year for the promotion of the study of Malay literature and to expend a portion of the funds in hand for that purpose. This was seconded by Mr. A. W. O'Sullivan.

Mr. Eschke proposed to add as an amendment by collecting and publishing manuscripts of value. The amendment was seconded by Dr. Lim Boon Keng and carried.

The Council and Officers for the following year were then elected, viz :—

President: The Right Rev. BISHOP HOSE.

Vice President for Singapore: Hon. W. R. COLLYER.

Vice President for Penang: DR. BROWN.

Hon. Secretary: H. N. RIDLEY, ESQ.

Hon. Treasurer: DR. HANITSCH.

Councillors elected by ballot were:—H. Eschke, Esq., A. W. O'Sullivan, Esq., A. Knight, Esq., Lim Boon Keng, Esq., P. J. Burgess, Esq.

Notes of thanks were then proposed to the President, Secretary, Treasurer, and Auditor.

Annual Report for 1901.

The Council are gratified to be able to state that the financial condition of the Society continues to be very favourable.

The following new members have been elected since the last general annual meeting :—

Mr. R. A. J. Bidwell
Dr. P. Galistan Edgar
Mr. J. B. Elcum
Mr. M. Hellier
Mr. F. W. Knocker
Mr. G. M. Laidlaw
Mr. A. W. Lermit
Rev. E. S. Lyons
Mr. J. A. Roberts, M. A.
Mr. J. H. Tatlock
Mr. Waterstradt
Mr. F. Wickett

One journal (No. 36) has been published during the year, and material for No. 37 is in the printer's hands.

A number of journals and pamphlets from various other societies have been received during the year and added to the library of the society.

It is to be greatly regretted that more material for publication is not available in spite of the large number of members of the society. This deficiency is particularly noticeable in the absence of contributions of short notes of features and occurrences of interest which must be frequent in and around the Malay Peninsula.

A statement of accounts of the Treasurer is appended.

Honorary Treasurer's Cash Account for the year ending 31st Dec., 1901.

Dr.		$	c.		*Cr.*	$	c.
1901	To Balance Current Account Chartered Bank ...	59	01	1901	By American Mission Press printing Journal No. 35.	187	61
	,, Do. Do. Mercantile Bank	895	09		,, do. No. 36.	217	85
	,, Fixed Deposit Mercantile Bank	1035	30		,, Mounting Maps... ...	46	...
	,, Subscriptions for 1897 ...	5	...		,, Clerk's Salary	60	...
	,, do. ,, 1898 ...	5	...		,, Collector's Fee	10	...
	,, do. ,, 1899 ...	10	...		,, Printing, Postage, Bank Discount on Foreign Notes, &c.	80	31
	,, do. ,, 1900 ...	75	...		,, Fixed Deposit, Mercantile Bank	1053	41
	,, do. ,, 1901 ...	440	...		,, Fixed Deposit, Mercantile Bank	500	...
	,, do. ,, 1902 ...	15	...		,, Balance in Chartered Bank	58	95
	,, Sale of Journals &c. ...	187	57		,, Balance Mercantile Bank	1000	77
	,, Sale of Maps	453	18		,, Cash in hand	6	...
	,, Sundry Recoveries ...	4	82				
	,, Interest on Bank Balance	35	93				
		3220	90			3220	90

M. HELLIER,

Honorary Treasurer, Straits Branch, Royal Asiatic Society.

Kelantan and my trip to Gunong Tahan.

BY MR. JOHN WATERSTRADT.

Gunong Tahan, the supposed highest mountain in the Malay Peninsula had always a great attraction for me, ever since I had ascended the Kina Balu mountain in Borneo, situated in about the same latitude, as I wanted to compare the fauna of the former with that of the latter. However it was not until ten years after my first ascent of Kina Balu, that I found an opportunity of undertaking the journey to Gunong Tahan. My plans for the trip had been laid long beforehand, and I had decided to take the Kelantan route in preference to that of Pahang, as several expeditions which had tried to reach the mountain by the latter route had failed, mostly I believe owing to the difficulty of obtaining food supplies. I decided to abandon everything in the shape of comforts for this trip, taking with me only things that were absolutely necessary, and utilising all the coolies I could get for carrying provisions. Leaving Singapore towards the end of April in a small coasting steamer, I arrived in Kelantan four days later, the steamer calling at most of the ports along the coast, on the way up. The mouth of the Kelantan river is on the map given as farther south than it really is, but that entrance has long ago sanded up, and ships have now to enter by the northern entrance. Lately a fairly good light house has been erected by the Siamese, and a Siamese gunboat is always stationed there. Owing to the shallowness of the river all steamers are obliged to anchor just inside the bar, behind a sand spit that affords good shelter; and passengers and cargo are taken up to Kota Bahru in small native boats.

Kota Bahru, the capital of Kelantan, is situated about eight miles from the mouth of the river, on the right bank of the same, and contains according to the Rajah's account, about 20,000 inhabitants. The town consists really of two villages;

one of them called Taratchin, is divided from the other by a branch of the river, and is chiefly inhabited by Chinese. Formerly nearly all the business was done in this place, but the ever changing river silted up just there, and now nearly all business is transacted in the native town. a little farther up river, where there is deep water close in to the bank. The Rajah at the instigation of the Siamese is now making fairly good roads in every direction through the town. Just before I arrived, there had been a tremendous fire in the Chinese village, half of which was burned down one night, when most of the inhabitants were attending a fête given by the Rajah on account of his marriage with the Rajah of Singora's daughter; and a number of young children who were left alone in the houses were burnt to death. The Rajah used this opportunity to make a broad street right through the whole village, where there formerly had been only narrow crooked paths. During my stay in Kota Bahru, before going up stream, I was the guest of the Siamese Commissioner and was introduced by him to the Rajah, who immediately offered to provide me with boats and men for the trip up the river. The present Rajah is a young man of about thirty-five years, and owes his position to the Siamese, who on the death of the old Rajah installed him as such, in preference to the rightful heir, on the supposition that he would conform to their wishes. So far the Siamese have interfered very little in the internal affairs of Kelantan, keeping only a Commissioner there, who acts as a sort of adviser to the Rajah, and a small garrison; but signs are not wanting that they want to get a more direct control of affairs. and probably before very long Kelantan will be to all purposes, except in name, a Siamese province. The Rajah's palace is just in the middle of the town, and every forenoon from about 10 to 1 o'clock he holds his court there, afterwards going for a drive out to his villa, that he has built in a garden outside the town. I visited him there one afternoon, and found workmen everywhere building cages for wild animals, and the Rajah told me he intended to start a small Zoological Garden there.

It was the dry season when I arrived in Kota Bahru and the heat was very intense. the thermometer seldom going below 100° in the daytime and 90° at night. The Kelantan river, which in the rainy season often overflows its banks, was now nearly dried up, so we had great difficulty in getting up stream with the three large house boats that the Rajah supplied for me and my men. The river is about 250 yards wide at Kota Bahru, and continues to be about the same width up to Sungie Lebeh, which river falls into the Kelantan river from the right, thirty to forty miles up stream. The banks of the river up to Quala Lebeh are pretty thickly populated, and are lined with coconut groves most of the way. It took us four days to reach Quala Lebeh, as we had only one gang of men to pole the boats, and consequently had to stop at night. I decided to try first to get to Gunang Tahan by the Lebeh river, as that, according to my idea, was the nearest way, and we therefore proceeded up that river for another day, when the rapids were reached, and we had to stop, as it was impossible to get our heavy boats over them.

On the way up the river we had passed a number of bamboo rafts, with small huts built on them, either moored along the banks, or drifting slowly down stream. They were inhabited by Malays from Kota Bahru, who go up stream to trade or to plant paddy, and prefer living on the river rather than ashore. When therefore a suitable place is found, these people make a raft and build a hut thereon, wherein they live until they have traded away or exchanged all their goods for jungle produce, whereon they drift down stream with their barter or their paddy.

Just below the rapids a number of these rafts were moored, forming a floating village on the river; and as I had to wait there some days before I could get smaller boats to take me up river one of these huts was given up to me, and I discharged the three large boats and sent them back to Kota Bahru, as they were of no further use to me. I had to wait a week at this place before I got smaller boats and other men, to take me further up river, and in the meantime, I and my collectors that I had brought with me from Borneo, did a little collecting; but the species found there were of little interest being the same as are found everywhere in the low land of the Peninsula. At last we got away again in three smaller boats, all heavily loaded; and for the next few days we had a very rough job pulling the boats over the rapids, of which the river was full. We had to stop at each village we passed on the way, to get fresh boatmen, as none of these would go any farther with me than to the next village, and this continual stopping and changing men delayed us a good deal. On the third day Quala Aring was reached; and as it was my intention to go up that river, we had again to wait to procure still smaller boats, but we soon managed to get six of these and plenty of men, so were able to proceed the next day. It was at Quala Aring that the Skeat expedition stopped, while Mr. Skeat went across to Pahang and tried to get up the Tahan from that side, but failed, I believe owing to want of provisions, the same as Messrs. Ridley and Davidson before him. The river Aring is of course much smaller than the Lebeh, and is full of rapids, but it was not very difficult to get the boats over them. I counted them several times, and found that on an average we passed over about ten of them an hour the whole way up. There are very few people living on this river, there being only one village of any size, about three days up stream, so I had not to stop on the way to change men, as those from the Quala took me right up to that village. The village is called Buntie, and is the last inhabited place in Kelantan, so I had to halt there to get together coolies and to find out the best way of ascending the mountain, of which I got a good view away to the southward on clear days. The natives there called it Gunong Siam. There is plenty of game to be had round the village, as there are lots of old clearings, where deer and pigs are plentiful, and tigers are also found in numbers. On the very first day I stayed there, while out collecting butterflies close to the house, I heard a noise in the thick low jungle close by, resembling the purring of a cat, only louder, but took no notice of this until a couple of Malays came running after me telling me to come back at once, as there was a tiger quite close by. As I had then about forty Malays with me I wanted them to go into the jungle and drive the tiger out into the open, a distance of not more than twenty or thirty yards, where I could get a shot at him; but though they were all armed with spears and I offered them some of my guns also, they were afraid of doing so, and I did not get a sight of the brute though he stayed in that thicket not 150 yards from the house the whole day. On my return from the mountain however I got him, as he had just then killed a buffalo, and came back in the afternoon to have another meal.

About a day's journey to the westward of the village at another tributary to the Lebeh river, called Sungei Aring, was situated a small encampment of Sakais and as I wanted these men to show me the way to the mountain, I got the headman of the village to send word to them to join me at once. The whole tribe of Sakais living there are considered to be the property of a Malay living half way up the Aring; and this man brought all the full grown men to me a couple of days later. There is only this one settlement of Sakais in this part of the country, whereas there are said to be thousands of them living up the Ulu Kelantan river. Those that I had with me (ten or eleven men), were all remarkably strong and healthy looking, and were not so much troubled by skin diseases as is usually the case with the Sakais. After getting all the information I could about the Gunong Tahan or Gunong Siam, I decided to follow the Aring as far as it was possible to go with the native boats, and then strike across country straight for it. We therefore loaded the provisions in eight or nine small dug-outs, and went up stream with these, most of the coolies following us along the bank. After going on in this way for a couple of days I found it impossible to get any farther with the boats, as the river was getting too small, and the boats had continually to be hauled over trees that had fallen across the river and barred the passage. We therefore stopped at a small tributary called Sungei Tamu, and while my Malays made everything ready for the march inland, I sent the Sakais in the jungle to cut a path for us along the bank of the Tamu, which I had decided to follow seeing that it seemed to come from the direction that I wanted to take. The Sakais came back in the evening of the same day and reported having found an elephant track, which they had followed up a high ridge, and they were of the opinion that by following this track we should reach the foot of the mountain. They had come up with the elephants about half way up the mountain, there being seven of them, but as there were no tuskers amongst them, they had not fired on them, and the elephants continued their journey to the top of the ridge and then disappeared down the other side. We halted two days while the different packages were divided amongst the coolies. The rest of the provisions which we could not take with us were hoisted up in a high tree, for fear of the elephants getting at them, and well covered with mats to protect them against rain, and then we started. In the beginning we got on very well, the ground rising gently the whole time, but as we got higher up on the spur, walking became more difficult, and we had to catch hold of roots and branches to help us in getting up, and had it not been for the deep footprints made in the soil by the elephants it would have been nearly impossible for the coolies to get up with their heavy burdens. I reached the top of the ridge, which proved to be about 3500′ high, about noon, together with a few of my Borneo men and a couple of Sakais, and wanted to proceed along the comb of the ridge, which was running in the direction I wanted to take, but the Sakais insisted on our going down the slope on the other side, as they said we should find no water near the top; so I had to give in, and we went down about 1000′ till we came to a tiny stream, where I decided to camp for the night. I had not taken any tent with me, but my men soon made a shelter with some large palm leaves, some three feet broad and seven feet long, which we found growing in abundance in altitudes from 500′ up to 4500′. None of the other coolies reached our camp that night, and next morning we went farther down the slope till we reached a stream, which the Sakais declared to be the Sungei Tahan, and waited there until all the coolies had arrived. From the river bed we got a fine view of a mountain, that I judged to be about 5000′ high, standing straight up and looking very formidable and inaccessible with a magnificent waterfall near the top. The natives declared that this mountain, which was not more than 2 miles distant, was part of Gunong Tahan, the higher part of which was shut out from sight by the high ridges running parallel with the river. We followed up the river for some time, but it was very difficult climbing and when we had reached an altitude of 2500′ the coolies declared that they would not go any farther, so I had to make my camp there. Most of the coolies then returned to their villages; but I kept the Sakais and my collectors with me, and with these I ascended to the top of the mountain that we had seen from the river. The ascent was however so difficult, that it was impossible to carry anything with us, and we had therefore to return to our old camp every night. Especially the last 500′ proved to be very difficult to negotiate, as there was a sheer wall of rock about 300′ in height, down which the Tahan river come thundering, forming the splendid waterfall that we had seen from the bottom, and which I christened the Lama Falls. After several failures we at last found a way to the top of the falls and were then confronted by two peaks, nearly inaccessible, and the river seemed to wind its way in between them. We tried to follow up the river, but soon had to stop, on account of huge boulders and deep pools, with sheer walls on each side, making it impossible for us to get through; so we had to give it up, and attempted instead to scale the least forbidding looking of the two peaks.

In this we succeeded at last, only to find however the top involved in thick mist, so that it was impossible to see anything and to ascertain whether we were really on a spur of the Tahan range or not. As it was impossible to stay up there for the night without any food or shelter, we had to return to our camp, my intention being to get up there again early the next day and have a good look at the surrounding country before the clouds commenced to gather round the mountain tops, as they always do in the afternoon. In the night however I got an attack of fever and was unable to walk for some days, so I sent my men up to try and find out the whereabouts of Gunong Tahan, and they returned with the information that the mountain that we were on was in no way connected with the Tahan, which they said they had seen a long way to the westward, but according to them it would be impossible to get up that mountain from that side, as we were separated from it by a deep chasm, which ran along for many miles, with sheer walls of rock on the other side, up which they declared it impossible for anybody to get. The Sakais stated that they had seen another river coming nearly from the top of the mountain, and this they took to be a branch of the Galas river, another tributary of the Kelantan river; and they strongly advised me to go back, and try to get up the mountain by that route. As they absolutely refused to follow me when I wanted to try and get up from where we were, I had to give it up, though I myself believed it to be possible; and, as after events showed me, it proved to have been the easiest and nearest route to the top. However I made up my mind to return to Kota Bahru and get up another expedition up the Galas river; so I returned to the village Buntie with a few of the Sakais, leaving the rest of them together with my Malays and all our provisions on the mountain; as we had found a number of rare birds there, and I was desirous of getting some more of them. I told my men that they must try and find an easier way to Tahan, and if they succeeded in this they were to wait for me near the top of the mountain. I may as well mention here that some time after I left, my men did find a way up Gunong Tahan, and stayed there for some time waiting for me; but I never met them, as it took me a much longer time to get up the mountain by the Galas route than I expected, and so at last they returned down towards the coast by the same way as they got there. The trip back to Kota Bahru occupied ten days, and I had to wait there another month before I got new provisions and material up from Singapore for my next expedition. When these at last arrived a new start was made but this time I got rather a poor lot of boatmen, the Rajah having lent most of his best men to Messrs. Duff and Lathyen who went up stream just before me to prospect for gold. It therefore took me six days to get up to Quala Lebeh, and there I found the above gentlemen busy prospecting the river bed, having with them a great number of coolies. This time I went past Quala Lebeh, following the true Kelantan river, and in four days reached Quala Galas, where we were detained a short time, owing to the river being in flood. We passed several small tributaries on the way, most of them being uninhabited, being the Rajah's rattan preserves. Once in five to six years he farms each of these rivers out to some of the Chinese traders in Kota Bahru, who then collect all the rattans and other jungle produce, and after that nobody is allowed to touch anything for the next five to six years, thus giving the rattans a chance of growing to a fair size before they are again cut down. We then proceeded up the Galas, which a short distance from its Quala is only about 50 yards wide, and gets narrower farther up, and full of rapids. There are a number of small villages on its banks, from which I obtained relays of boatmen, those I had with me from Kota Bahru having by this time all got fever, or were at least pretending to have. As we got farther up, the river got very shallow, and I had to leave the big boats behind, and go on in small dug-outs. We passed a few Chinamen on the way, washing gold, and they told me they could make about 75 cents a day, when working hard. At other places where the Chinamen were working farther inland, they had dammed up the river to obtain sufficient water, causing us a lot of trouble, as we had to unload the boats before we could haul them over these obstacles.

At last the village of Pulai was reached, and there I had to stop, as it was impossible to proceed any farther by boat. The village contains a couple of hundred inhabitants, nearly all Chinese, there being only a few Malay traders there, who occasionally come up from Kota Bahru and stay there a month or two, until they have have bartered all their goods away for gold. Formerly all the Chinese living there were gold miners, but now that all the gold-bearing sand in the river bed has been washed over and over again and the returns are getting less, many of them have settled down as agriculturists and have large paddy fields all round the village. Formerly there must have been a much larger Chinese population in these parts, as traces of very large alluvial workings are found up nearly all the small creeks, being now overgrown and covered with dense jungle. At present there are only a couple of Chinese Kongsis working on anything like a large scale, and I believe they are doing fairly well. Lode working has also been tried by the Malays, but though the ore obtained was of very good quality they soon gave it up, the work proving too hard for them. The formation of the country about there is mostly hard blue limestone which crops through everywhere, the hills in some places rising to a considerable height, mostly impossible to ascend owing to their steep or overhanging walls. All these limestone hills are full of caves and passages made by the water in bygone days, and in places some very curious dripstones* are formed, the best specimen of which is found in a cave close to the village, about

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*Stalagmites ?

100′ up in a hill, and the Chinese, on account of this bearing some resemblance to one of their deities, formerly used it as a temple, and there is still an old rotten table up there with some candlesticks full of burned joss sticks, and remains of half-burned paper. It has however not been used for a long time, and the ladders that led up to it have long since rotted away, so I had to climb the face of the rock to get up; but I should not recommend anybody to try that experiment, unless he is a good climber. My men that were with me looked at it, and decided that it was safer to stop at the bottom; so I let them remain there, while I went up with a young Malay who had been up there once before. The Chinese are rather afraid to go near these limestone hills as they say that the tigers use the caves as sleeping apartments, and this is very likely, though I never found traces of them in any of the many caves that I visited, whereas I found plenty of traces of elephants in the larger caves that were level with the ground, and the Malays told me that these animals often made them their homes for months at a time. The floors of the caves were often strewn with the remains of dead and broken snail-shells, which had fallen down from the roof in the dry season, when most of the snails die. However I also found a number of live shells hidden away in the dark and moist crevices of the rock, among them several new and rare species. Most of the snails have a great liking for limestone rocks, and the collector will find more specimens in one hour on these rocks than in the jungle for one month.

From the top of some of these cliffs I got a good view of the surrounding country, but I looked in vain for a mountain that looked anything like 10,000′ high. Towards the East were two mountain ranges which I supposed to be about 6,000′ high, the natives calling the most northern Gunong Siam, and the other Tulang Rabong. Gunong Siam appeared to be slightly higher than the other, and the Malays stated that this was the same mountain that the Malays of Pahang called Gunong Tahan. I did not believe this possible, but seeing that the people on the Aring river also called Tahan the Gunong Siam, I decided to ascend the mountain to make sure of it. I had great difficulty in obtaining any coolies to go with me owing to the rivalry between two of the native chiefs, and had at last to be contented with eight Pahang Malays; so we were only able to carry provisions with us for ten days. The first part of the road lay through fairly flat country and we had no difficulty in cutting a path through,—going northeast by the compass, for none of the Malays had been in that part of the country before. At night we camped on the banks of a fairly large river, which proved to be the Kateh, a tributary of the Galas; and next day we followed this up till we got into the hills, passing an old deserted mining camp on the way. We only had one glimpse of the mountain on our journey, though we climbed several hills to obtain a good view, but always found other hills in front of us obstructing the view towards the mountain. That night we also camped on the banks of the river, which here reaches an altitude of 800′ above sea level, the men making a rude shelter of palm leaves, under which we slept undisturbed, though we that day had come across several tracks of tigers. Next day we started up a ridge which we thought sprung from the mountain, but when we at last reached the top of it 2500′ up, it proved to be separated from the mountain by another branch of the Kateh river, and so we had to climb down again on the other side. The descent proved to be very difficult, especially the last 300′ to 400′, and I have no idea how the coolies came down, as each man chose his own way over the face of the cliffs, where overhanging boughs and roots afforded the only support for lowering oneself. All got down without any mishap, and we all collected together in the river bed, which was only about 20′ wide, and commenced to look for a way out of the cañon or gully that we had got into, and this we found to be no easy task. It was impossible to get up on the other side of the stream, the walls of rock there being even more forbidding looking than those we had descended; and to get up by following the stream was equally impossible as there was a waterfall about 100′ in height in front of us, from which the water came rushing down with a deafening noise. There was therefore no alternative left us but to go down stream; and this we did for a short distance, scrambling over huge boulders, wading through deep pools of water, and clinging to narrow ledges of rock where the pools were too deep to wade through; but at last we got to a place where it was impossible to pass through, the bed of the stream being only about four feet wide, and through this narrow passage the water came rushing down over boulders and falls, making it impossible for any living thing to get through. Luckily we found a place where the rocks were less precipitous and we managed to get up these, following the direction of the river till we at last got on more even ground; and as we were by this time all thoroughly done up, we decided to camp on a small level piece of ground, that was situated just where another small mountain stream joined the one we had been following. There was no doubt that this stream came right up from the mountain; so next day we followed it until we reached a ridge. This we commenced to ascend, finding it rather difficult at first to cut a path through the jungle, but when we got farther up we found a fairly good track, evidently made by wild beasts, and the ascent was rather easy after that for the next 2000 feet. We passed a number of the argus pheasants' sporting places, on the way up, and heard their shrill cries all round, but never saw any, though I often tried to get near them and have a shot; but they were very shy and cleared away before I could see them. As we got higher and higher up, the path was evidently less used by animals, and got overgrown, until it was completely lost; and we then had to cut our way through low but very dense and thorny jungle, full of a kind of thin rattans, the leaves of which with their hundreds of bent thorns proved a great hindrance to our progress, as they caught hold of our clothes everywhere, and as soon as we had got loose from one of the leaves, we were hooked on to by half a dozen others. About two o'clock in the afternoon we came out on a small plateau at a height of about 4000′, and from there we had a good look at the top of the mountain which was not very far off; but as at the rate that we were travelling, it would not be possible to reach it that day, we left the plateau, and followed the slope of the ridge until we reached a dried-up water course; and finding a little water in a hollow, we decided to camp there. There were no large palm leaves to be found thereabout, and so darkness and rain came upon us before we had finished our shelter, and we passed a miserable night, wet and shivering with cold, as the rain had put our fires out. Next morning we had a hurried breakfast, being anxious to reach the top as early as possible before the clouds commenced to gather round it. The rain had made everything nasty and slippery, and as we had to get up the steep slope, it took us some considerable time before we again got out on the ridge, and both I and the coolies had some bad falls and got a good deal bruised. After getting out on the ridge the ascent was again easier, going up very gradually, but the rattan jungle still gave us lots of trouble, and as I had to go ahead myself and clear the way I got the skin of my face and hands torn a good deal, and smeared all over with blood. At last we reached the top of the mountain, which proved to be only 5500′ high, so I was quite certain that it could not be Gunong Tahan.

We had a splendid view from there toward the north across immense stretches of low and flat land,—Gunong Siam being evidently the last peak to the northward of that range of mountains in the middle of the Peninsula, whereof Gunong Tahan forms a part. The mountains to the south and south-east were hidden from view, being enveloped in the clouds. The top of Gunong Siam is only a long and very narrow ridge, being in some places only four feet wide, and covered with thick brushwood. After the coolies had rested for an hour I sent them down another side of the mountain, which I thought would take us down to the Kateh river sooner, with orders to stop as soon as they found water and suitable camping ground. I remained on the top of the mountain together with one of the Malays, in the hope that the clouds would clear away and enable me to get a view of the other mountains. In this I was not disappointed, as the mist cleared during the afternoon, and I got a good view of the Tulang Rabong range to the south and south-east, from which we seemed to be separated by the river Kateh. This range is about the same height as Gunong Siam, and behind it, far away to the southeast, I now and then got a glimpse of a higher mountain the top of which was continually hidden by the clouds; and I felt certain that this must be Gunong Tahan, there being no other mountain in sight approaching the same height as that. I saw at once that it would be impossible to reach it by going straight from where we were, as we should have to cross ridge after ridge of Pulang Rabong to get there, and after the experience that we had had of the Kateh ridges I thought it most probable that we should never get there that way. We could either go round to the north of Gunong Siam, and then due south till we reached the foot of the mountain (and this would certainly save us a lot of trouble as the country round that way seemed to be fairly flat), or else we could go to the southward of Tulang Rabong and then straight to Gunong Tahan. This route appeared to be the shortest from Pulai, and I selected it though I knew the country to the southwards to be very mountainous, and difficult to get through; but as I wanted to do a little collecting on the Tulang Rabang, this suited me the best. After being fully satisfied that it was really Gunong Tahan that we were looking at, we commenced our descent, a shower of rain hurrying us on, and we soon overtook the coolies, who had not yet found any suitable place for camping. It was already commencing to get dark, and we were threatened with heavy rain so we hurried on as fast as the ground would allow us to travel, and just before it got dark we found a place beside a small stream, with plenty of large palm leaves close by, so all hands were soon busy making a shelter; and just as the rain came pouring down we had got it ready, and could cook our dinner. The camp was at 4000′ so it was rather cold up there, and we had to keep a large fire burning the whole night; but still the Malays complained about the cold, and were glad when we started next morning for the valley. We expected to strike our old track from Pulai during that day, but somehow we missed it, and got into country unknown to us; so I decided to follow the Kateh down stream, until we reached the village which I knew existed close to its junction with the Galas. We reached the place late the next afternoon, and slept that night in a small Malay hut. Next day I got a couple of Malay guides, who took us back to Pulai where I arrived shortly after noon; but some of the poor coolies did not arrive till shortly before dark, being thoroughly done up, with their feet full of thorns and bleeding from innumerable leech bites.

We now remained some days in Pulai to recoup ourselves, during which time I tried hard to get some more coolies; but only succeeded in getting two more from a village down river as none of the Chinese from Pulai would go with me into the jungle. It was now the beginning of September, and the rainy season was commencing, so we were likely to have a rather bad time of it during our journey. The night before we started on our second trip it rained very heavily, and in the morning all the jungle paths in the low land were transformed into small streams, and the rivers were all in flood. For half a day we followed a track which ran due south into Pahang, the borders of which are only one day's journey from Pulai; but coming across an old Chinese gold mine, all overgrown with jungle, we completely lost sight of the path, and after wasting some time trying to find it again I decided to cut a path myself, going in a more easterly direction as I was afraid we were getting too far south. After doing this for some time we came across another old disused path evidently leading to some other old workings, and this we followed till evening, when we camped at a small stream. Next day we reached a large limestone cliff, at least 500′ high, very long but narrow, being in one place where a narrow passage ran right though it, not more than 20′ wide, whereas it must have been several miles long, for I started to go round it, but after marching for one hour and seeing no sign of the end of it, I gave it up and returned. We found a small cave (Goa the Malays call them), and we camped in it for the night, the Malays however preferring to sleep outside, as a cold wind seemed to be coming down through some opening in the roof. I sent a couple of my best men out to try and scale the cliff and obtain a view of Tahan, which we had not yet seen on this journey; but they found it impossible to get up, the sides being everywhere perpendicular or overhanging, and there were no bushes or roots growing on the sides, to hold on by. The following day we struck a branch of the Kateh river, which ran in a southerly direction, and following it up we came to a deep pool full of fish; so I discharged a dynamite cartridge in the midst of them, and that night my Malays had a real feast, fresh fish being very scarce at Pulai, for there are none to be found in the Ulu Galas, where all the deep pools in the river have long since been filled up by the washings from the gold mines, leaving the fishes no place to breed or hide from their enemies. We then ascended a ridge running parallel with the

Tulang Rabong range, and reached a height of 2500′, but had to descend again on the other side, as a river had to be crossed which proved to be a branch of the Tenom, which again is a tributary of the large Pahang river. The descent was very steep and very slippery from the rain and just as we reached the river bed I slipped on a large boulder, and fell with great force against a large root, hurting my right side very much, and was unable to move for some time. I was afraid I should be unable to continue the journey, and we had to camp there that night, but next morning I felt much better and so we pushed on for another two days, when we struck another of the Pahang rivers, but whether this was another branch of the Tenom or whether it was the Kechau I was unable to determine. It rose near the top of Tulang Rabong, as I found out later by following it up very nearly to its source, about 5000′ up. We camped at the only level place that we could find, about 1500′ above sea level, but at night after a heavy rain we were nearly routed out of our camp by the river, which rose with startling suddenness and nearly flooded us out. The roar of the water rushing past us at a tremendous speed dashing against boulders and over falls was something not to be easily forgotten, and made sleep impossible that night. I decided to let most of my men remain at this place, while I went back to Pulai to obtain a fresh supply of provisions, but before doing so I ascended another range of hills that ran parallel with the river on the opposite side, and reached a hight of 4500′ from where I had a fine view of Gunong Tahan. I thought it would take us 4 to 5 days to reach the foot of it, and told my men to commence cutting a path up to it while I was away, at Pulai. I then went back, taking with me only two coolies, and walking hard for 2½ days we reached Pulai. It proved very difficult to obtain sufficient coolies at once, so I had to send 10 men off first, with provisions for my men, while the headman of Pulai sent for the Malays living farther down stream to come up and go with me. Twelve days were lost in waiting for them, and when they at last arrived there were only 15 of them instead of 25 that I wanted, but finding it useless to wait any longer I started off with these men, taking as much provisions with us as they could carry. These men came from the low land down river and were not used to work in the mountains, so they very soon got tired, and I had continually to sit down and wait for them. We reached the camp of my Malays in four days, and it was my intention to push on the next day for the foot of Tahan; but my Pahang Malays, who had been out cutting part of the path while I had been away, had found this such hard work and such difficult climbing that they refused to go on. I argued with them a long time but it was no use, and promises or threats of punishment had equally little effect on them, and next morning they had disappeared, leaving behind them their parangs and spare clothing, which I had taken from them the previous evening, thinking thereby to prevent them from running away. When the Kelantan Malays saw this they also refused to go any farther, and the whole lot of them went back to Pulai leaving me only six men that I had with me from Kota Bahru, and a couple of Pahang men that joined me a few days later. Including myself and my Chinese boy we were nine in all, and to push on for Gunong Tahan with so few men would have been useless, as we should only have been able to carry enough provisions to take us to the foot of the mountain and back; whereas I wanted to stay some time near the top of the mountain to collect specimens. Therefore I decided to remain where we were, in the hope that the headman at Pulai would send the Kelantan Malays back to me, when he heard how I was situated; and this proved to be correct, the men returning to me at the end of twelve days. In the meantime we had done some collecting, and got a few rare birds and some orchids. My boy who had seen the Chinese at Pulai working gold amused himself by prospecting in the river bed; and one day he brought back to the camp a large piece of quartz which proved to be very rich, the gold being visible running right through it. The lode that it came from could not have been far off, as the mountain which the river sprang from was quite close, but we had no time to look for it.

It was my intention to take that piece of quartz back with me to Pulai on the return journey; but, as luck would have it, I never came back that way; and so it is still lying there waiting for somebody to come and pick it up. Having got the men back we then made another start, having first to climb the ridge

4500′ high in front of us, and this proved such hard work that the men could not walk any farther when we reached the top, and so we camped there, going down the other side next morning. There we again got into Kelantan territory, crossing a branch of the Galas river, and went up a long and high ridge forming the boundary between Pahang and Kelantan. It was right from the foot of Tulong Rabong to Gunong Tahan, and as it did not appear to be known to the Malays, we christened it Bukit Gajah on account of the number of elephants that were to be found there, the top of the ridge seeming to be their regular highway. We saw only female elephants, the males being very scarce in Kelantan, where everybody is allowed to shoot them, and before long these will be quite extinct. We kept along this ridge for four days, reaching a height of 4500′ and then commenced to descend, being then opposite to Gunong Tahan, and only separated from it by a river, which proved to be the Relai, a tributary of the Lebeh. None of the branches of the Galas come from the mountain, and it was evidently a great mistake my trying to get up from there, as the way up from the Relai or Aring rivers is much nearer and easier. The descent was difficult and would have been well nigh impossible if the elephants had not been there before us; but by following their tracks, and using the deep indents made by their huge feet, we managed to scramble down and reach the river, which is here 1200′ above sea level. Arriving there the Kelantan Malays left me and returned to their homes, and I was not sorry to lose them this time, as these men had enormous appetites and were eating up nearly all my provisions. The rest of us stayed a couple of days at the river, and then, having found a spur that seemed to go in the right direction, we commenced the ascent.

The first 1000′ were very difficult, and took us a long time to negotiate, but after that we got out on another spur and the ascent got much easier, there being a fairly good track made by wild beasts. Reaching a height of 4000′ we got into rattan jungle, which seems to grow on all the Kelantan mountains of any height; so we left the comb of the spur and went down the side until we found water, where we then camped; but could not find any level place for our shelter, and had to build it on the side of the hill, and as it came on to rain heavily towards evening we had a rather bad time of it that night, as the water came pouring down the hillside on the ground that we slept upon I, myself, was lying on a few raised sticks and was fairly well off; but the Malays had been too lazy to cut enough of these for themselves, and so had to sleep on the ground on a few leaves, with the water runing in streams under them. Next morning on starting we soon got into rattan jungle again, and owing to the difficulty of getting through this, we only got up another 1000′ that day, camping at night by the side of a small stream. As this seemed to be a likely place for collecting purposes, I decided to make it my headquarters for the time that we stayed on the mountains. It took us two more days to cut a path to the top of the mountain, the jungle being very dense and difficult to cut through. Every afternoon it rained heavily, so that we always got drenched before we could get back to camp; and as the path we had cut was only a very poor affair, we had to go bent double half of the way on account of overhanging branches, and it was very annoying to feel the water running from my cap down my neck, finding its way down my back, and finally coming out of my shoes. In the camp it was very cheerless too, in the evening, there being only very few leaves suitable for making a roof in the neighbourhood and consequently our shelter was very small and badly made. From the top of the mountain, we saw the village on the Aring river where I had stayed on my first trip, and as that appeared to be the only place within measurable distance from which we could obtain any food, I decided to send some of my men there to get a fresh supply of provisions, as we were running short of these. I told the men to follow the Relai river, when they reached the foot of the mountain, until they were clear of the hills, and then strike across country till they reached the Aring, when they were to follow that stream till the village was reached. There they were to buy provisions and get some coolies to carry them back to us. I sent three men, and when they left we had only provisions left us for another ten days; but by giving out short rations I hoped to get them to last until the men could come back from the village. The rest of us stayed up there collecting, and I found the best collecting ground to be between 5000′ to 7000′, but we also went several times right up to the top when the weather was fine, in the hope of finding traces of the men that I left on my first trip; but could find none where we were, which, considering the immense size of the mountain, was not at all strange, as half a dozen different parties might have been on the mountain, without seeing each other. Far away we could see a large black patch that looked as if the low jungle had been burned away; but it was too far for us to attempt to reach it, as we should not have been able to do much collecting on the way, and I wanted to get together as large a collection as possible before our provisions gave out. Later on, I found out that it really was a piece of jungle that my men had burned down to attract our attention, but they had already left the mountain two months before we reached it. The mountain seemed really to consist of three separate ranges running parallel from about east to west, connected with each other at their highest points by a number of peaks, the one in the middle being the highest. In the ravines between the different ranges the following rivers had their sources, as far as I was able to judge with the help of my Pahang Malays:—towards the Kelantan side the river Relai and two branches of the Aring: towards the Pahang side the rivers Kechau, Tahan, and perhaps also another branch of the Tembeling,—as I am not sure that the river which we struck on my first trip was not a branch of that river, and not the Tahan as the Sakais stated. I found that all the branches of these rivers which sprung from anywhere near the top of the mountain, had very discoloured water, something like the water found in stagnant swamps; whereas the streams that came from an altitude of less than 4000′ had beautifully clear water; but what might be the reason of this I did not find out. Nearly the whole of the mountain consists of white quartz. From my own experience on the Tahan or Tembeling river, and from what I saw from the top, I should say that it will be very difficult to get up from the Pahang side, as the mountain on that side is very precipitous (probably deriving its name of Tahan on that account) and provisions have to be carried a much greater distance than from the Kelantan side. I only saw one village on the Pahang side, lying beside a huge limestone cliff that somewhat resembled the shape of an elephant; but none of my men could give me any information as to the name of the river by which it was situated. If anybody wants to try and get up from the Pahang side I would recommend him to start from that village. There was a very grand view from the top, especially very early in the morning, when the mist covered all the low-lying land, making it resemble a lake of snow; and so low did the mist keep to the ground that the top of some of the tall jungle trees could be seen, looking like masts of sunken ships, and the smaller mountains stood out dark and sombre like islands in this beautiful lake. Later on in the day the mist would gradually rise and come rolling up the mountain side, with the dark clouds gathering fast near the top, and in the afternoon and evening the rain would come down in torrents. The trees and rocks were all covered with masses of long moss in which the rain kept hanging, so that it was impossible to move about without getting wet; and we had to go about day after day in wet clothes, with wind and rain blowing in on us at night. Besides which my Malays suffered much from the cold at night, when the temperature often went down to 50°.

Altogether I stayed eighteen days near the top of the mountain, and I got a very good collection of birds and some orchids; but I was only able to take a small quantity of the latter, as transporting a large number of them to the coast would have been impossible with the few men that I had. Of mammals we only got very few, and the same was the case with insects, of which I had hoped to get a lot; but with the wet and miserable weather that we had, all the insects that we saw flew very high, and even if they had come down, it would have been nearly impossible to chase and catch them in the thick low brushwood that covered the whole of the upper part of the mountain.

For the last few days that we stayed up there we only got half rations, as I was very loath to go down, hoping that the three men would return from the village in time with the provisions; when it was my intention to remain up there for another fourteen days. But when the last grain of rice and all the tinned provisions were finished, we had to start on the way down, taking with us all my collections except the orchids, which I was forced to leave behind as we could not carry them with us. I expected to find the men with the provisions at the foot of the mountain, but on arriving there we found no sign of them. However I had left there four tins of salmon and two pounds of biscuits when we went up the mountain, and we now made a scanty meal of half of these, reserving the other half for next day. At night we discussed what was to be done, and as all the Malays wanted to make for the nearest village to obtain food there, I gave in; though I would rather have remained at the foot of the mountain and waited for the return of the three men, living on the mountain on such game as we could shoot and snare. Early next morning we started, leaving most of my things behind in the camp, taking with us only a blanket each, and my collection of birds. My Malays wanted me to leave the latter behind to enable us to travel quicker, but I was afraid the skins would be spoiled before we could return for them, and so I made the men carry them along. Following the Relai river we soon came past the mountain, and as the three men who had gone before us had made a track for us we got on rather quickly. A couple of hours walking brought us to a shelter where these men had camped, and beyond this were two tracks, so it was evident the men had gone wrong first, and finding this out, had returned to this place and struck out in another direction. We kept on following the river, but soon got into difficult country, with spurs from the mountains running right down to the river, so that we often had to cross the same, to escape having to climb over these hills, some of which were rather high and steep. Having to cross the river so often delayed us a good deal, as the river was in flood, the water coming tearing down with great force; and great care had to be taken in crossing over. The course of the river was very crooked indeed; but we had to keep to the banks and follow all its bends and windings, as we got into the hills as soon as we attempted to cut off some of the corners; and the Malays declared they were unable to do any climbing, as they had had so little food for the last few days. So on the whole I do not think we got very far that day. After rigging up a shelter for the night we fired a couple of dynamite cartridges in some pools in the rivers, but only got a few small fishes, that would scarcely have satisfied the hunger of one man, so I got the Malays to collect some young palm shoots, and we made a meal of them; but the Malays declared that they were no good, saying there was absolutely no strength in them, and on the following days I could not get them to collect any. The next day we kept on following the river, hoping to find some bamboos, of which we then intended to make a raft and drift down stream until we reached the Sakai settlement which I knew existed there; but to our great disappointment there were none to be found in that part of the country, so we kept trudging along, now on this, and now on that side of the river, the Malays complaining very much, and getting more disheartened the farther we went. I tried my best to cheer them up and get them to hurry on, but finding this useless, I left them and went on by myself till some time in the afternoon; when having found a suitable place for camping I sat down and waited for them. When they at last arrived I had great difficulty in getting them to collect leaves for a shelter, as none of the large kind of palm leaves were to be found in the vicinity, and the men preferred to sleep in the open, rather than to take the trouble of making a shelter of the smaller leaves found there. However I insisted on having one built, and lucky it was that I did so, as the rain came pouring down as soon as it was finished, and this lasted half the night, so we should have been in a sorry plight had we had no roof over us. While the men made the shelter I fired another charge of dynamite in a pool, and this time I was more successful, getting a number of good-sized fishes. So we had enough for a fairly good meal that night and for another the next morning before we started, that being the last food we tasted before we reached the village four days later. The river was now in flood to such an extent that it was dangerous to cross over, and as we could not keep continually on one side of it owing to the many hills, we decided to leave it altogether and strike across country until we reached the Aring, where we could make a raft and drift down to the village. Soon after we had left the river bank, we got to some hills, and seeing no chance of getting round by the foot of them, I started climbing up, the Malays of course protesting; but as I did not take any notice of that, they had to follow me, grumbling very much as they went, and sitting down very often to rest. My Chinese boy proved to be the best man of the lot and kept fairly close behind me, whereas the Malays were soon left far behind.

The hill proved to be very much higher and steeper than I expected, being in fact a mountain range 3,000′ high, dividing the Relai and Aring rivers, and the Malays were terribly done up when they at last reached the top. While I waited for them up there, I found a spur sloping gently down on the other side towards the north-east, and this we now followed right to the foot of the range, where we came across a small stream and camped close by it. We had no dinner that night, but there being still some tea left, we each had a cup of this before going to sleep. Following the stream next day we at last reached the Aring river, of which this was a tributary called Patei. It was about noon when we struck the Aring, and great was our joy on finding an old disused bamboo raft lying half way up on the banks. It had evidently been left there by some gutta hunters, and we soon had it in the water; luckily it was just big enough to hold us and our things, and after having cut some long poles to steer with, we started on our way down river.

Owing to the late heavy rains the river was in flood, and this was rather in our favour, as there would be no shallow places over which we otherwise would have had to haul the raft. We were travelling at a great rate of speed, it being impossible to stop the raft, but we did not anticipate any danger, as the Malays seemeed well able to steer us clear of all rocks and snags. The men were all in high glee, now, at the prospect of soon reaching the village, shouting, singing and chaffing each other, and in their own estimation they were evidently great heroes. So we went dashing down one rapid after the other, the men yelling derision at them all, when just as we came round a bend in the river we dashed into the stem of a huge tree that had fallen across the stream and effectually blocked the whole river. The thing happened so suddenly that it was impossible to do anything to prevent it; there was a great cracking of the bamboos and down went the raft, throwing us all out in the river. We all managed to scramble up on the tree, and as all our things were light we fished them up again, with the exception of my only pair of shoes, which I had taken off as a precaution when we started, in case we should have to swim for it. We also managed to haul the raft up over the tree, and as the Malays thought that it would still hold together, we decided to go on with it. A great many of the bamboos had been split open by the collision, so the raft was not nearly as buoyant as it had been before, and could scarcely carry us all. Going down over the rapids now became very dangerous, as the water would come rolling in over the raft, pressing now this now that side under water, so that we had difficulty in balancing ourselves on it, and I was afraid the raft would go to pieces at any minute. So after we had had about one hour of this dangerous sport, I thought it better to stop and keep to the jungle. So we landed and made a shelter, but it was a very poor one, the Malays being now again very disheartened, did not work very willingly, and the rain coming on again we passed a really miserable night in our wet clothes, with wet blankets, and the rain dripping on us from above, and running in streams under the few leaves on which we had made our bed, and without a morsel of food. Next day we looked for bamboos with which to repair our raft, but not finding any, we had to abandon it and start on our weary tramp again. I went ahead myself cutting a path for the others, as they all had something to carry, and a pretty bad time I had of it with my bare feet; for as I had to keep looking ahead, I could not always see where I put my feet, and as a consequence I often trod on thorns and sharp sticks; besides which there were thousands of leeches about, which took a great fancy to my bare legs, where they stuck till they had had their fill, as I often felt too weary to stoop down and pick them off. We knew that there was a native path on one side of the river, running from the village into Pahang; and so we went inland away from the river, trying to find it, but coming to a range of hills the Malays declared themselves unable to get over them; so we had to go back to the river and follow its many bends and curves. Often we had to make great detours inland when we came to tributaries of the Aring, which were deep and swollen, so that we had to find fords before we could cross over them. We walked the whole day, camping just before it got dark, and started off again early next morning, having then good hopes of reaching the village that day, as I had found some landmarks that I knew. The Malays were however very slow, so I got far ahead of them all, by myself, thinking they would hurry on when they found that they were being left so far behind. Towards three o'clock in the afternoon, just when I had decided to stop and await my men, I heard a shout down river, and on my answering, a boat appeared, that had been sent up from the village to meet us. Two of the Malays whom I thought were far behind me had lost my track altogether, and in looking for it they had come across the real path to the village, and this cheering them up, they had hurried on to the village, and hearing there that we had not yet arrived, they sent a boat up stream to meet us. I waited till my other men came up, and then we all went down the river to the village, arriving there just as a heavy thunderstorm came on, and very thankful were we to be under a good roof again. The day after, the three men that I had sent for provisions came back to the village with a long tale of woe. They had arrived there four or five days before us, having taken fourteen days to reach it, whereas it took us only seven days. They had then bought some provisions and started on their return journey to the mountain. When two days out, their Sakai coolies ran away and left them; and instead of pushing on by themselves as they ought to have done, they returned to the village to obtain other coolies. So it was well for us that we did not stop at the foot of the mountain and wait for them to come back.

After the men had rested for four or five days, I sent them back to the mountain, together with a number of Malays from the village, to fetch the orchids and my other things that we had left behind. The coolies were to bring these back to Buntie, whereas my own men would go from the mountain back to Pulai, where they would fetch those of my things that I had left there; and then going down by the Galas river, join me at Kota Bahru. It was impossible for me to return to the mountain myself, having no shoes, with my feet in a terrible state, swollen and torn, so that I was scarcely able to walk for days after. Had it been otherwise I should certainly have gone back and stayed up on the mountain for another month. Shortly after the men had left I got a bad attack of fever, which luckily did not last very long but left me very weak. I got a tiger while waiting for the return of the men, there seeming to be plenty of them in that part of the country, as a report came to hand that two men had been eaten by them at Quala Aring just before. Going down stream we passed eight of them,—two old and a young one,—that were disporting themselves in the jungle close to the bank; but we were then just passing over a rapid, and travelling at a great speed, so that it was impossible to get a shot at them. After waiting ten days the coolies returned, and I started on the return journey to Kota Bahru, the trip down stream taking only eight days, as all the rivers were in flood. The men that I had left on my first trip upon the mountain I picked up on the way down, and they stated that they had succeeded in scaling one of the peaks of the Tahan, to the south of where I got up, and they brought a fairly good collection of skins back with them.

I had to wait about a week in Kota Bahru for my men from the Galas river, and then went back to Singapore, the whole trip taking seven months instead of three as I had reckoned on.

On the Hymenoptera collected by Mr. Robert Shelford at Sarawak, and on the Hymenoptera of the Sarawak Museum.

BY P. CAMERON, OF NEW MILLS, DERBYSHIRE.

This paper is based on material collected at Sarawak, by Mr. Robert Shelford of Cambridge University and on the species in the Sarawak Museum brought home by Mr. Shelford for the purpose of being named. In addition to many known species the two collections contain many noteworthy undescribed genera and species. Since the publication of the paper by the late Mr. F. Smith (Jour. Linn. Soc. 1857) on the Hymenoptera collected by A. R. Wallace, very little has been written on the Bornean species, of which an immense number must still remain to be discovered in all the families, but more particularly among the smaller parasitic tribes—Ichneumonidæ, Braconidæ, Oxyura and Chalcididæ.

TENTHREDINIDÆ.

Hylotoma pruinosa, sp. nov.

Coerulea, dense albo pruinosa; alis hyalinis, macula substigmatali fusca, ♀.

Long: 10 mm.

Hab. Sarawak, Borneo (Shelford).

Bright metallic blue densely covered with a white pile. The flagellum of the antennæ is black, the hinder tibiæ are broadly fuscous in the middle. The frontal fovea is deep, its sides oblique, it extends from the ocelli to shortly below the antennæ and is open above and below; the lateral furrows of the face are wide and deep; the labrum has a slight violet tinge. The vertex and the mesonotum have a slight purple tinge. The cloud on the fore wing occupies all the radial cellule; the upper half of the first cubital and the greater part of the second, the third cellule being also slightly clouded; the second cubital cellule is distinctly longer at the top and bottom than the third; both the recurrent nervures are received shortly behind the middle of the cellules; the third transverse cubital nervure is angled outwardly above the middle and from the angle a short nervure issues; the upper and lower parts are straight and have an oblique slope. Abdomen coloured like the body; the apex of the first and the base laterally of the second segment are fuscous.

Allied to *H. janthina* Kl. and *H. maculipennis* Cam. Characteristic is the third transverse cubital nervure with its distinct nervure issuing from the angle above the middle.

EVANIIDÆ.

√ *Evania borneana*, sp. nov.

Nigra, capite thoraceque albopilosis; mesonoto sparse punctato; alis hyalinis, nervis nigris, ♂.

Long: 8 mm.

Hab. Sarawak (Shelford).

Antennæ longer than the body; the scape not dilated, narrow covered with a pale pile and as long as the following two joints united; the third and fourth joints are about equal in length. Head shining, smooth, almost impunctate, and covered with short white pubescence. Clypeus on the lower side bounded by a distinct curved furrow. On the front, outside the antennæ, is a narrow covered keel. The ocelli are in a curve; the hinder are separated from each other by a distinctly greater distance than they are from the eyes. There is a narrow, but distinct, keel between the antennæ. The mesonotum bears some large scattered punctures; the lateral furrows are distinct, deep and curved; there is a distinct, longitudinal furrow opposite the tegulæ. The scutellum has scattered punctures in four irregular rows. The median segment is regularly reticulated, except in the middle above, where it bears large, deep scattered punctures. The apex of the propleuræ is irregularly furrowed above. The upper part of the mesopleuræ is smooth; the lower regularly punctured. The breast is sparsely, and not very strongly, punctured. Wings clear hyaline: the stigma and nervures black; the second transverse cubital nervure is obsolete; as is also the cubitus from the first transverse cubital nervure, which is interstitial with the recurrent.

The radial cellule is wide at the apex, through the radius having an oblique downward slope at the base; the apical abscissa is straight and oblique; the transverse basal nervure is almost interstitial. Legs black; the calcaria fuscous; the tibiæ without spines.

The metastemal forks are roundly curved. In Schlettere's Monograph (Ann. K. K. H. of Mus. Wien. 1889) this species would come near *E. appendigaster* Linn.

Megiseleus longicollis, sp. nov.

Black, the head yellowish-red; the four front legs tinged with rufous; the wings clear hyaline, the cubital and the transverse cubital nervures obliterated; the radius incomplete, ♀.

Long: 18; terebra 17-18 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ black; the basal three joints rufous. Head pale rufous, the orbits with a yellowish tinge; the anterior three tubercles are longer and sharper than the posterior; the front is coarsely, closely striated, obliquely above, transversely below; the vertex, behind the ocelli, is indistinctly furrowed in the middle, and closely obliquely striated on either side of it; the outer orbits are smooth. The prothorax has a brownish tinge; it is distinctly longer than the mesothorax, is deeply and widely incised at the base, the apex of the incision being rounded; the basal half is closely transversely striated, the apex is indistinctly striated; the dilated apex is smooth. Mesonotum coarsely, irregularly reticulated at the base; the apex is widely depressed in the middle, the raised sides are irregularly punctured. Scutellum smooth, its sides punctured. Mesopleuræ smooth; the base pilose. Median segment closely and regularly reticulated. The propleuræ in front of the tegulæ are strongly striated. The hinder coxæ are closely, but not strongly, striated; the coxal teeth are irregular and not very prominent. Wings clear hyaline; the nervures and stigma black; the basal abscissa of the radius is straight and oblique and forms an angle with the apical branch which is about equal in length to it; only the basal two cellules are enclosed or complete, and the only apical nervure is the abbreviated radius.

A species easily known by the abbreviated and obsolete ulur nervures. The pronotum, too, is longer and narrower than it is with the other Oriental species.

Megiseleus maculifrons, sp. nov.

Black, the head red; the vertex and the upper part of the front black; the outer orbits dull red, narrowly yellowish on the inner side close to the eyes; there is a broad red mark immediately behind the ocelli; legs black, the four front tarsi dull testaceous, the basal joint of the hinder tarsi white; the wings hyaline with a slight fuscous tinge; the stigma and nervures black, ♂.

Long: 12 mm.

Hab. Baram District. Low country (Hose).

Antennæ black; the scape and pedicle rufous. Head rufous, the outer orbits and the face duller, more yellowish in tint; the vertex and the upper part of the front and the upper part of the outer orbits, black; behind the ocelli is a red mark, which is broader than long. The front tubercle is longer, more sharply pointed than the others and is directed backwards; the hinder pair are shorter and broader than the middle. The vertex is narrowly rugose in the middle, the sides are striated transversely. Mandibles rufous, black at the apex, the palpi black, paler towards the apex. Prothorax short; the pleuræ depressed in the middle.

BRACONIDÆ.

Iphiaulax, Foer.

The following three species of *Iphiaulax* are similarly coloured—luteous with the wings fuscous, yellow at the base. They may be separated as follows:

(*a*) The keel on the centre of second segment not reaching to the middle of the segment, not much longer than broad; *acragas.*

(*b*) The keel on the centre of the second segment reaching beyond the middle.

The keel reaching to the apex, of equal width throughout; the segment at its sides not depressed, nor strongly transversely striated; *astriochus.*

(*c*) The keel not reaching to the apex; the segment at its sides depressed and strongly transversely striated; *ceressus.*

Iphiaulax acragas, sp. nov.

Long: 11 mm; terebra 6 mm.

Hab. Borneo (Shelford).

Antennæ black, the scape luteous beneath. Head smooth and shining; the face sharpened, sparsely covered with long fuscous hair; the clypeus is bordered by oblique furrows laterally; apex of mandibles black; the palpi luteous. Thorax smooth and shining sparsely covered with pale pubescence. Legs coloured like the body; the apical joint of the four hinder tarsi fuscous. Wings fuscous, with a slight violaceous tint; the base behind the transverse basal nervure yellowish-hyaline; the first cubital and the discoidal cellule are lighter coloured in the middle; the stigma is black, with a luteous spot on its base. The central part of the petiole is rugose and is stoutly longitudinaly striated in the middle; the second is closely rugously punclured; the lateral depressions are wide, deep and closely longttudinally striated; the oblique apical depressions are narroweir, are deep and closely striated; the suturiform articulation is deep and rather strongly and regularly striated; the third segment is closely punctured; the basal furrow is wide, deep and closely striated in the centre; it becomes narrowed and curved at the sides; its apical furrow is narrow. The apical segments are smooth; the furrows on the fifth segment are narrow and striated.

Iphiaulax ceressus, sp. nov.

Long: 12 mm.

Hab. Matang, 3000 feet (Shelford).

Antennæ entirely black. The face is more yellowish in tint than the vertex; its centre is irregularly striated; the sides punctured; the clypeus is distinctly raised and clearly separated from the face. Mandibular teeth black. Thorax smooth and shining, sparsely pilose. Wings smoothy-fuscous from the transverse basal nervure; behind it yellowish-hyaline; the lower part of the stigma to the transverse cubital nervure luteous. The central part of the petiole is rugose and longitudinally keeled down the centre; the four following segments are closely rugosely punctured; the basal keel extends to near the apex; it is of nearly equal width to near the apex; its sides are keeled and it is distinctly raised; the segment on either side of it is depressed and bears three stout, irregularly curved keels, the lateral depression is shallow; the sides of the segment outside it forms three ridges. The furrows on the other segments are longitudinally striated; the basal branch of the suturiform articulation is larger, broader, and more oblique and more distinctly striated than the apical.

Iphiaulax astiochus, sp. nov.

Long: 9; terebra 1-2 mm.

Hab. Sarawak, Borneo (R. Shelford).

Antennæ entirely black. Front and vertex smooth, shining and bare; the face irregularly rugose; the mandibular teeth are black. Thorax smooth and shining; the median segment is thickly covered with long pale hair. Wings dark fuscous; yellowish-hyaline behind the transverse basal nervure. The central area of the petiole is rugosely punctured; it is slightly narrowed towards the apex. The middle segments are closely rugosely punctured; the central keel extends to the suturiform articulation; it is of equal width throughout; is longitudinally striated, with the sides raised and irregular; the basal lateral depression is narrow at the base, much wider at the apex and is stoutly striated at the base of the dilated part, which turns inwardly at the apex; the suturiform articulation is wide and deep; its basal lateral fork is more oblique and narrower than the apical; the other furrows are closely striated; the basal more strongly than the apical; the apical segments are smooth and are more yellowish in tint than the others.

Spinaria curvispina, sp. nov.

Rufa, thorace spina collaris curvata, abdominis dorso strigoso; capite, thorace pedibusque anterioribus rufis; abdominis dorso pedibusque posticis nigris; abdominis apice pallide flava; alis fuscis, ♀.

Long 12-13 mm.

Hab. Borneo (Shelford).

Antennæ longer than the body, black, tapering towards the apex. Head and antennæ rufous, smooth and shining; the median segment irregularly reticulated; more strongly and regularly at the middle than at the base. On the back of the pronotum, at the apex, is a long curved spine, which tapers towards the apex and is directed towards the head; between this and the middle is a large leaf-like plate, hollowed above, its sides curved and expanded outwardly; the lateral wings are narrowed towards the apex; at the base, running up the spine, is a stout keel. At the apex of the middle lobe of the mesonotum is a stout keel; the part on either side of it is striated. On the depression behind the scutellum are six stout longitudinal keels; from the middle of the sixth runs a stout, transverse keel; behind this are three short keels. The sides of the median segment at the apex project into stout teeth. The four front legs are paler in tint than the thorax; the apical joint of the tarsi is black; the hind legs are entirely black. Wings uniformly dark fuscous; the stigma and nervures are deep black; abdomen deep black; the sides of the first and second segments and the base of the first and the apical segment are pale yellow; the dorsum is closely and strongly longitudinally striated; the first two transverse furrows are strongly striated; the sides of the third and fourth segments project into sharp, stout spines; the spine on the fourth is the larger; on the centre of the third at the apex, is a stout triangular tooth, on the middle of the fourth is a larger, sharper one; the apical segment ends in a longish, sharp tooth.

Comes nearest apparently to *S. spinator*, Guer, from Bengal, but differs in the colouration of the wings and legs.

Shelfordia, gen. nov.

Median segment with a narrow area in the centre, extending from the base to the apex; second, third and fourth segments of the abdomen closely longitudinally striated; the second with four converging keels; there is a transverse crenulated furrow on the base of the third segments only, and no oblique ones. Malar space large; the oral region widely open. Front depressed in the middle; the centre with a stout keel; the sides of the depression keeled. The third and fourth joints of the antennæ are equal in length and somewhat longer than the fifth. Legs of moderate length; the fore tarsi twice the length of the tibiæ. Sheaths of the ovipositor densely pilose.

The middle lobe of the mesonotum is distinctly separated; the scutellar depression is shallow and longitudinally striated; the furrow on the metapleuræ is long, wide and deep; above its apex is a longitudinal keel. The occiput is not margined; the temples are moderately large and are rounded behind. The legs are pilose, but not so thickly as in *Myosoma.* The clypeus is bordered by a wide oblique depression. The second and third segments are distinctly longer than their width at the apex; the abdomen is fully twice the length of the thorax. The inner orbits above are distinctly keeled.

A distinct genus easily known by the area on the median segment, by the longitudinally striated abdominal segments, by the margined upper inner orbits and by the keeled front.

Shelfordia ruficeps, sp. nov.

Nigra, capite, pedibus anticis, prothorace mesothoraceque rufis; alis fumatis, ♀.

Long: 11; terebra 22 mm.

Hab. Sarawak (Shelford).

Antennæ black; the scape rufous in the middle beneath. Head rufous; the face and clypeus closely punctured and sparsely covered with long black hair; the centre of the face slightly raised and smooth. The clypeus is clearly separated, especially at the sides; the top, in the middle, is transverse, its sides rounded; at the sides is a smooth depression. Mandibles rufous, their teeth black. The vertex is sparsely punctured, especially at the sides; the depressed front is more shining and smooth. Pro- and mesothorax with the scutellum smooth and impunctate; the scutellar depression is narrow and is stoutly longitudinally crenulated. The median segment is smooth and is sparsely covered with longish black hair. The anterior wings are uniformly smoky-fuscous; the hinder have the basal half milk-white; the nervures and stigma are black; in the anterior is an oblique white cloud on the base of the first cubital cellule and extending obliquely into the discoidal, The front legs are rufous like the thorax; the base of the middle coxæ rufous; the rest of them and femora piceous; the hinder legs are entirely black; the coxæ impunctate. The petiole is raised in the centre; the raised part is bordered by an irregular stout keel; the centre towards the apex is irregularly transversely striated. The centre of the second segment is raised, the raised part is bordered by a keel and becomes gradually narrowed towards the apex which is sharply pointed; it is irregularly striated; bordering this is an area of equal width extending from the base to the apex of the segment; it is stoutly transversely striated, with some irregular longitudinal striæ in the middle; outside this is an area which becomes gradually wider towards the apex and bears some stout, irregular striæ. The third segment and the basal two-thirds of the fourth are stoutly longitudinally striated; the transverse furrow on the base of the third segment is stoutly striated; the apical segments are smooth; the basal four ventral segments are milk-white.

Myosoma, Brulé

The species of this genus here described are black; with the head, thorax and the two or four anterior legs rufous, and the wings dark fuscous. The species may be divided into two sections:—

(*a*) Head, thorax and the four anterior legs rufous. The third segment with a deep wide transverse striated furrow near the centre, the base stoutly, longitudinally striated; *forticarinata.*

The third segment without a transverse furrow; the base not stoutly striated; *brevicarinata.*

(*b*) Head, pro- and mesothorax rufous, the two anterior legs rufous. The ovipositor not much longer than the body.

(*a*)' The keel on the second segment narrow extending to the apex of the segment; its base and apex dilated smooth and shining; *longicarinata.*

(*b*)′ The keel on the second segment broad, not extending to the apex of the segment, its base not smooth.

The second segment at the base on either side of the keel deep black, striated, the middle segment deep black; *fuscipennis.*

The second segment at the base on either side of the keel brownish, not striated; the middle segments brownish; *trichiura.*

Myosoma forticarinata, sp. nov.

Long: 13; terebra 19 mm. ♀.

Hab. Sarawak, Borneo (Shelford).

Antennæ black, the scape rufous. Head and thorax rufous, smooth and shining; the face rugosely punctured, the punctures running into reticulations and sparsely covered with longish black hair; there is a narrow furrow on the front. Mandibles and palpi rufous; the mandibular teeth black. The four front legs are rufous; the middle pair darker in tint, especially on the tibiæ and tarsi; the tibiæ and tarsi are thickly covered with longish dark hair. Wings dark fuscous; the nervures and stigma black. Petiole broadly depressed, on the sides the central part is bordered by stout keels and there is a stout keel down the centre; the basal part bears some stout irregularly curved keels. The second segment bears a complete central and a shorter lateral keel, which converge slightly towards the apex; the basal area is triangular, smooth and shining; the base in the centre is depressed, the centre bears some stout irregular keels; the outer parts bear stout, oblique keels; the inner parts at the apex being smooth and more deeply depressed than the outer. The two transverse depressions are wide, deep and stoutly longitudinally striated; the part between the two is stoutly longitudinally striated. The apical segments are thickly covered with long black hair. The sheaths of the ovipositor are stout and are thickly covered with black hair. The tarsal spines are rufous.

Myosoma brevicarinata, sp. nov.

Long: 12; terebra 21 mm. ♀

Hab. Borneo (Shelford).

Scape of antennæ rufous; the flagellum is brownish beneath, especially towards the apex. Head rufous; the face slightly paler, more yellowish in tint, rugosely punctured and covered with pale hair; the front and vertex are more sparsely covered with longer darker hair. Mandibles black, broadly rufous at the base. Thorax smooth and shining; the middle of the mesonotum behind is broadly expressed; the central lobe is clearly defined; the median segment is thickly covered with longish fuscous hair. Wings dark fuscous, with a violaceous tinge at the base; the nervures and stigma are black. Metapleuræ widely and deeply furrowed down the middle. The front legs are rufous with a yellowish tinge; the middle pair are brownish; the femora paler; the tarsal spines are black. The petiole is broadly keeled down the centre; the sides on the apical half are stoutly irregularly striated; the keel on the second segment extends to the transverse furrow; its dilated base is finely striated; the sides and centre are irregularly, longitudinally striated to near the apex which is smooth and laterally expressed; the third segment at the base is longitudinally striated; the striæ in the middle reaches to the apex; the apical segments are brownish.

Myosoma trichiura, sp. nov.

Long: 14; terebra 14-15 mm.

Hab. Sarawak (Shelford).

Antennæ black, the base and apex of the scape rufous. The sides of the head are punctured; in the centre of the face are three stout, transverse keels. Mandibles rufous, their apex broadly black. The face is rather thickly covered with long black hair; the frons and vertex sparsely so. Pro- and mesothorax rufous, smooth and shining; the median segment black. Legs black; the anterior pair rufous; the apex of the median segment is sparsely, longitudinally striated. The apex of the petiole is coarsely irregularly reticulated the lateral furrows are depressed and transversely striated. The second segment is irregularly longitudinally striated; its basal area is broad at the base, becomes gradually and sharply narrowed towards the apex, is longitudinally striated and extends beyond the middle; on either side is an oblique, closely striated furrow. The third and fourth segments are closely striated; the basal furrow on the third extends to the sides; from it issues a curved furrow; the furrow on the fourth does not extend to the sides in a straight line but curves broadly backwards to it; there is a transverse, striated furrow on the apex of the third and fourth segments. The sheaths of the ovipositor are broad and thickly covered with stiff black hairs.

This species is an *Iphiaulax* with the hairy ovipositor and legs of a *Myosoma*.

Myosoma longicarinata, sp. nov.

Long: 11-12 mm ♀.

Hab. Sarawak. (Shelford).

Antennæ entirely black, head rufous; the face more yellowish in colour; it is smooth, sparsely punctured on the sides and bearing some longish black hair; the clypeus is irregularly rugose. Mandibles black, the base broadly rufous. Pro- and mesothorax rufous; the median segment, the base of the pleuræ and the lower part of the furrow black. The two front legs are coloured like the thorax; the middle have a piceous tinge; the tarsal spines are for the most part black. Wings dark fuscous, with a violaceous hue; the stigma and nervures are black. There is a stout longitudinal keel on the basal half of the petiole; the apical part is irregularly longitudinally, stoutly striated; the lateral depression bears stout, transverse keels. The central part of the second segment is obliquely narrowed towards the apex; the central keel reaches to the apex; there is a smooth triangular area at its base and a semicircular one at its apex; the central part is reticulated somewhat strongly; the lateral is closely longitudinally striated. The two transverse furrows are longitudinally striated; the second more finely and closely than the first. The third segment is closely longitudinally striated and is broadly depressed in the centre; the fourth is more closely and finely striated, the third and fourth segments are brownish.

Myosoma fuscipennis, sp. nov.

Long: 16 mm. terebra 16 mm.

Hab. Borneo (Shelford).

Antennæ black; the scape piceous in the middle below. Head mahogany coloured, smooth and shining; the centre of the face marked with some irregular transverse keels; the sides are sparsely punctured. Mandibles black, broadly rufous at the base; the palpi rufo-testaceous. Thorax smooth and shining rufous; the median segment black. The anterior legs rufous; the posterior four black; the middle trochanters rufous. Wings brownish-smoky, with a slight violaceous tinge at the base; the stigma and basal nervures black; the apical nervures fuscous. The sides and ventral surface of the petiole are pale testaceous; its base is smooth; the rest of it coarsely reticulated. The second and third segments are closely, irregularly longitudinally punctured, at the apex almost reticulated; the fourth is closely reticulated, the centre more strongly than the sides; the other segments are smooth. The keel on the base of the second segment is not very distinctly defined; it is broad at the base, becomes gradually obliquely narrowed towards the apex, is more strongly striated than the rest of the segments and reaches to shortly beyond its middle; the lateral furrows are wide, oblique and stoutly striated; the lateral furrows on the third and fourth segments are narrower and more roundly curved; the transverse furrows on the base and apex of the third and fourth segments are closely longitudinally striated.

Holcotroticus, gen. nov.

Claws of all the legs bifid; the inner claw smaller than the other. Median segment completely areolated. Apex of the scutellum bifurcate, bordered by stout keels; the apex of the median segment obliquely depressed. Malar space moderately large, the oral region not greatly lengthened. Wings longer than the body; the areolet narrowed at the top; the nervures without a stump of a nervure. The oblique mesopleuræ furrow is wide and deep; a narrow oblique one runs from its middle. Pro- and mesopleuræ above with an oblique keel; between the tops of the middle and hinder coxæ is a stout keel. The fore tarsi are longer than the tibiæ; all the joints are longer than broad; the middle three are much shorter than the others. The hinder legs are much longer than the others; their coxæ are large, more than twice longer than wide. The joints of the maxillary palpi are elongated, the three penultimate joints are not short, compressed or lenticular. The occiput is margined, the sides more distinctly than the upper part; the two hinder ocelli are flat, not convex; there is a small single keel between the antennæ; the scape of the antennæ is stout, about twice longer than broad; the front is keeled in the centre; the keel is stout with oblique sides; it is not hollowed, and there is no keel on each side. The first cubital cellule is clearly separated from the first discoidal; all the apical nervures in the hind wings are obliterated; there is only the brachial cellule defined and there are no transverse nervures; the radial cellule in the fore wing is elongate, narrow.

The affinities of this genus are with *Agathis* and *Troticus*. From the former it may be separated by the cleft claws; in the latter peculiarity it agrees with *Troticus*; but it wants the abnormal palpi of that genus. The hinder legs are longer than they are with *Agathis*, and this is also the case with the wings. The middle lobe of the mesonotum is distinctly raised; the scutellar depression is wide and narrow; the scutellum is keeled at the base.

Holcotroticus ruficollis, sp. nov.

Niger, capite, prothorace, mesothorace, pedibusque anticis rufis; alis fumatis, nervis stigmateque nigris ♂.

Long: 8-9 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ black; the scape rufous. Face and clypeus shining, sparsely and slightly punctured and thickly covered with short, blackish hair. Thorax rufous; the median segment, except the pleuræ at the base which are rufous, black. Mesonotum sparsely and indistinctly, the scutellum more distinctly, punctured; its apex stoutly keeled and depressed laterally above. Mesopleuræ, below the oblique furrow, closely and distinctly punctured; at the base above are two stout oblique keels; the furrow is wide and bears some stout oblique keels; below the middle behind is an oblique furrow; the apical bordering furrow bears some stout keels. The basal furrow on the metapleuræ is wide and deep; on it is an upper and three lower stout, widely separated, keels. On the base of the median segment are three, on the apex five areæ; the central basal area is smaller than the lateral and is stoutly transversely striated; the central apical one is hollowed and is gradually narrowed towards the apex; there is also an outer large spiracular area. The two front legs are of a paler rufous colour than the thorax; the middle pair have a piceous hue. The wings are of a uniform dark fuscous-violaceous colour, with black nervures and stigma. Abdomen deep black, smooth and shining; the petiole is furrowed along the sides.

The malar space is not quite so long as in typical *Agathidini*, the head not being so rostriform as usual. It differs also from *Agathis* in the hinder claws having a tooth near the base.

ICHNEUMONIDÆ.

Siphimedia, gen. nov.

Wings without an areolet; the recurrent nervure interstitial, or almost touching the transverse cubital; the transverse basal nervure interstitial; the transverse median nervure in hind wings broken shortly above the middle. Mesonotum trilobate; the middle lobe transverse at the base, sharply pointed at the apex; the parapsidal furrows deep. Post-scutellum deeply bifoveate at the base. Median segment areolated more or less with three or four basal areæ; the areola distinct; the spiracles are linear, longish and are placed in the middle. Legs, and especially the posterior, stout; the hinder femora thickened, shorter than the tibiæ; the four front claws are cleft, the hinder simple; the hind coxæ are twice as long as thick, the basal joint only as long as the following three united and not much longer than the apical. The antennæ stout, shorter than the body. The petiole is twice longer than the width at the apex; it is broad at the base and becomes gradually wider towards the apex; the spiracles are placed shortly behind the middle; the abdominal segments are smooth, without furrows or depressions; the second and following segments are wider than long; the hypopygium is very large, plough-share-shaped and projects beyond the dorsal segment; the ovipositor is stout and is about as long as the body. The front legs have one, the four hinder two, spurs. There is a curved furrow on the sides of the mesosternum.

The antennæ are placed well up on the face, above the middle of the eyes, which are parallel; the apex of the clypeus is rounded; the mandibles have two subequal teeth; the clypeu is not distinctly separated from the face. The head is wider than long, is not much developed behind the eyes, and is obliquely narrowed there; the labrum does not project. The transverse cubital nervure has the stump of a nervure in the middle. This genus is founded on the species which I doubtfully referred to *Macrogaster* (*Manchester Memoirs*, XLIII, 193). Its real position is with the *Acvenitini*, and comes, in Ashmead's arrangement, nearest to *Arotes*, which may be known from it by the long and slender hinder tibiæ and tarsi, the tibiæ being almost twice the length of the femora. From *Acvenites* it may be separated by the deep parapsidal furrows, and by the areolated median segment. To this genus may be referred the following species.

Siphimedia bifasciata, sp. nov.

Nigra, facie clypeoque flavis; alis hyalinis, fusco-bifasciatis.

Long: 10 mm.

Hab. Sarawak (R. Shelford).

Head black, the face, except for a triangular black mark in the middle above, and the greater part of the clypeus, pale yellow. The face is strongly, transversely punctured; the apex smooth and depressed; the upper part of the head smooth and shining, and has a distinct plumbeous hue, as have also the pro- and meso-thorax which are smooth and shining; the apex of the middle lobe is stoutly transversely striated. There are three stout longitudinal keels on the scutellar depression. The areola is longer than wide, becomes slightly narrowed towards the apex, which is rounded; the apical central area is long and extends to the apex, its apical half is widely dilated and has the sides stoutly striated; on the top is a stout, curved transverse keel; the outer central area has two stout longitudinal keels in the middle. The median segment is irregularly punctured and coarsely irregularly longitudinally striated in the middle, especially at the base. The mesosternal furrow is wide and is coarsely transversely striated, and is thickly covered with white pubescence. Wings hyaline; there is a fuscous cloud, extending from the stigma to the cubitals and there is a similar cloud at the apex. Legs black; the anterior tibiæ and femora testaceous in front, and fuscous behind. The apical dorsal segments of the abdomen are lined with white.

This species is nearly allied to *S. nigricans*, it is smaller, has the mesonotum impunctate, not strongly punctured; there are only two central areæ on the median segment, and the basal area is longer than wide, not wider than long.

Rhyssa nigritarsis, sp. nov.

Nigra, late flavo-maculata; abdommis apice late brunnea; pedibus flavis, tibiis femoribusque nigro lineatis; tarsis posterioribus nigris; alis hyalinis, stigmate testaceo ♂.

Long: 17 mm.

Hab. Borneo (Shelford).

Antennæ black, the scape yellow beneath. Head black, the face entirely; the inner upper orbits to the ocelli, and the outer entirely, yellow. Face almost smooth, sparsely pilose, shining. Clypeus brownish; in the centre, at the apex, is a short, broad tooth with an indistinct tubercle on either side of it; above, on either side, is a fovea. On the thorax the following parts are lemon-yellow; the sides and base of the pronotum; the basal two thirds of the scutellum, the post-scutellum, the median segment, except at the base and sides; the tubercles and a large oblique line below them. The transverse striation, on the mesonotum does not extend to the apex; the scutellum is closely rugose; the median segment is smooth and shining, its base is depressed and black. The fore legs are yellow; the femora are brownish behind; the fore tibiæ are as long as the basal joint of the tarsi; the middle coxæ, femora and base of tibiæ are lined behind with black; the four hinder tarsi are black; the hinder coxæ are broadly black below and laterally; the femora are broadly black above; the tibiæ black, with a narrow yellow band near the base and a broader one at the apex. The basal two dorsal segments of the abdomen are black, lined with yellow down the centre; the third is brownish-black, banded with black near the middle; the others are brownish; on the fourth segment is a broad yellow band near the middle; the fifth is indistinctly yellow near the apex. The basal half of the ventral surface is pale yellow, marked with black; the apical brownish. The pedicle of the areolet is nearly as long as the basal abscissa.

Xanthopimpla labiata, sp. nov.

Lutea, basi late apiceque mesonoti nigris; thorace laevo; abdomine late nigro-maculato; alis hyalinis, apice fusco-violaceo ♀.

Long: 13; terebra 2 mm.

Hab. Sarawak.

Antennæ black; the scape yellow below. Head pallid yellow; above smooth, the face and clypeus closely but not strongly, punctured; the vertex in the centre is black from shortly behind the ocelli and this black mark is continued half way down the front, it becoming gradually narrower as it does so; there is an irregular black transverse mark on the centre of the occiput. The thorax is deeper in tint than the head; and is quite smooth, without any punctures; near the base of the mesonotum is a large irregular mark which extends to the sides; it is broadly rounded at the base,; with short blunt projections in the middle; the sides at apex project, the projections becoming gradually narrower towards the apex; the apex of the mesonotum is broadly black; the black mark behind being continued into the scutellar depression. Scutellum smooth, broadly rounded, smooth; the sides and apex keeled. On the basal half of the median segment are four lateral and one large central areæ; the central area does not project beyond the lateral at the apex, which is transverse; its basal third is obliquely narrowed; the apical two thirds are also obliquely narrowed; the apical lateral areæ are quadrangular and of equal width throughout; the apical half is keeled on the outside. Wings clear hyaline, except at the apex which is narrowly fusco-violaceous: the areolet is small and is distinctly appendiculated; the upper half of the recurrent nervure is sharply angled. The abdomen has the four middle segments closely punctured; the basal segment has a broad irregular black mark in the centre; the second and fifth segments have two large marks, those on the third and fourth being larger than the others; there are two minute marks on the sixth, and two broad, transverse ones on the seventh; the last segment is immaculate.

The labrum is longer than usual, being longer than the clypeus, it becomes gradually narrowed from the base to the apex; the eyes are large, parallel; the malar space is small; the spiracular area is obsolete; below the spiracles, in the middle of the metapleuræ, is a curved longitudinal keel, which originates shortly behind the middle, but not extending to the base; there are two transverse lines on the base of the median segment; the bases of the tibiæ are black. The basal segment is longer than the width of its apex; the other segments are all wider than long; the transverse and oblique furrows are distinct; the head is only very slightly developed behind the eyes.

Comes nearest perhaps to *X. punctata.* Fab. The edge of the pronotum is more sharply raised than usual; the base of the middle lobe of the mesonotum more distinctly separated, and the labium more projecting and sharper pointed,

Xanthopimpla nigrobalteata, sp. nov.

Lutea, nigro-balteata; mesonoto lævo, nigro, flavo-bilineato; pedibus flavis, late nigro-lineatis; alis hyalinis, stigmate fusco ♀.

Long: 12 mm.

Hab. Borneo (Shelford).

This species forms a section with three large areæ on the median segment and only one apical.

Antennæ brownish on the under side; the scape yellow beneath; head luteous; the ocellar region and the greater part of the occiput black. Face sparsely punctured, slightly keeled down the middle. Clypeus smooth and shining, its apex broadly rounded. Mandibles black at the apex. Mesonotum smooth and shining, base covered with a short pile, black; the sides and two lines in the middle, extending from the base to near the apex, bright yellow. Scutellum thickly covered with long black hair; its apex, from shortly behind the middle, black. The base of the median segment between the stigmas and to near the apex of the areæ is black; the central area is nearly square; the lateral are longer and narrowed towards the apex and are longer on the outer than on the inner side, the apex being oblique. The apex of the propleuræ, the base of the meso-, the top below the tubercles and the apex except a large spot above, and the basal half of the metapleuræ, are black. Legs coloured like the body; the top of the four front femora, the extreme base of the hinder, an oblique mark near the apex of the hinder and their extreme apex; the basal two thirds of the four anterior tibiæ, the base of the hinder pair and a broad band on their middle and the four hinder tarsi, black. The middle of the petiole broadly, the sides at the base and the base of the other segments broadly, black; the bands on the apical segments occupy more of the segments than on the basal; the segments and the transverse furrows are smooth, impunctate: there is an oblique furrow on the sides of the second and third segments and a narrower one on the fourth. The abdominal segments are all distinctly broader than long; the middle of the mesonotum is distinctly raised at the base; the scutellum is roundly convex and is not raised above the level of the mesonotum; its sides are keeled.

A species not difficult to separate from any of the described species by the smooth thorax and abdomen, by the black abdomen, banded with yellow, by the black mesonotum with two yellow lines, and by the three large areæ on the base of the median segment. It has a very similar appearance to *Chrysopimpla ornatipes* Cam.

Charitopimpla, gen. nov.

Apex of the clypeus obliquely depressed and with semicircular emargination; its top separated from the face by a straight furrow. Areolet small, triangular; the recurrent nervure is received at the apex. Abdominal segments closely punctured; segments 2-4 with transverse depressions, which are prolonged obliquely backwards; there is also a shallow transverse furrow at the apex. Median segment smooth without keels. Tarsi spinose; the claws simple. The transverse median nervure in hind wings is broken far below the middle.

The areolet is straight, not oblique: the transverse basal nervure is interstitial; the eyes are large, parallel and reach quite close to the base of the mandibles. The second to fourth abdominal segments are, if anything, wider than long, almost square: the metathoracic spiracles are small, oval. The last joint of the antennæ is not longer than the preceeding two united. The legs are short; the hinder tarsi are shorter than the tibiæ; the anterior are longer. The antennæ are stout and taper towards the apex.

Characteristic of this genus is the obliquely depressed semicircularly emarginate apex of clypeus. It comes near to *Erythropimpla*, Ashmead.

Charitopimpla flavo-balteata, sp. nov.

Nigra, abdomine flavo-balteato; pedibus flavis; posticis nigro alboque maculatis; alis hyalinis, stigmate testaceo, nervis nigris ♀.

Long: 13; terebra 7 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ about two thirds of the length of the body; black, distinctly tapering towards the apex; the scape yellow beneath. The face and clypeus are shining, have a plumbeous hue and are uniformly but not strongly punctured; the face is covered sparsely with white, the clypeus with dark hair; the front and vertex are bare, smooth and shining. Mandibles black; the palpi lemon-yellow. Pro- and mesothorax smooth and shining, covered closely with short fuscous hair; the scutellum bears longer and paler hair; the median segment is, especially towards the apex, thickly covered with long white hair. The lower part of the metapleuræ is smooth and bare. The four front legs are yellow, with the femora suffused with fulvous; the hinder legs white; black are the coxæ, except above the base and apex of the femora, a ring near the base of the tibiæ, a broader band on their apex and the apical joints of the tarsi; the femora have the sides and lower surface rufous; the coxæ are bright yellow above. Wings hyaline, with a slight fulvous tinge. Abdomen black; the apices of the basal five segments bright lemon-yellow; the sixth is yellow on the sides; the seventh broadly in the middle above; the segments are closely punctured; the petiole has the middle smooth and slightly depressed; the apical two segments are impunctate, the transverse depressions are shallow except on the fifth where they are wider and deeper and the basal one is striated.

OPHIONIDES.

Anomalon perornatum, sp. nov.

Nigrum, abdomine late ferrugineo; pedibus anterioribus, basi tibiarum posticarum late tarsisque posticis flavis; alis fulvo-hyalinis, stigmate testaceo ♀.

Long: 22 mm.

Hab. Borneo (Shelford).

Antennæ black; the scape yellow beneath. Head black; the face clypeus, labrum, the inner orbits, the malar space and the mandibles, except at the apex, bright lemon-yellow. The face broadly projects in the centre; the sides and upper part are irregularly wrinkled; the clypeus is smooth; the front, especially above, is coarsely, irregularly striated; above, the striæ are oblique; below, they almost form reticulations. Thorax entirely black; the median segment is coarsely, irregularly reticulated; the scutellum is coarsely reticulated and striated; above, it is flat in the centre and has an oblique slope; the mesonotum is rugosely punctured and irregularly reticulated; the apex is somewhat strongly transversely striated. The upper half of the propleuræ is closely rugose; the lower in the middle stoutly, longitudinally striated; the mesopleuræ above the middle coarsely striated, at the base reticulated. The four front legs are bright yellow; the apical three joints of the tarsi black; the hinder legs black; the basal two thirds of the tibiæ and the tarsi yellow; the trochanters beneath and the base of the femora fuscous. Abdomen ferruginous; the petiole and the second segment above black.

Anomalon fuscicorne, sp. nov.

Long: 15 mm. ♀.

Hab. Borneo (Shelford).

This species resembles closely the preceding species. The differences between the two may be expressed thus:

Face not raised in the middle; the front with oblique striæ; the upper part of the mesopleuræ coarsely longitudinally striated, the lower smooth.

Face not raised in the middle; the front not striated; the upper part of the mesopleuræ closely reticulated.

Antennæ brownish beneath; the scape yellow below. The face, clypeus, the inner orbits to near the ocelli, an oblique mark on the top of the eyes, the malar space, the lower orbits and the mandibles except at the apex, lemon-yellow. The front and lower part of the vertex are stoutly longitudinally striated; the striæ are curved and form almost reticulations; the face in the middle is irregularly longitudinally striated. The middle lobe of the mesonotum is coarsely longitudinally reticulated; the lateral are closely rugose. Scutellum coarsely rugose. Median segment coarsely reticulated, the top more distinctly than the sides, which have the reticulations less distinct on the lower part. The upper part of the propleuræ is coarsely reticulated, as is also the upper part of the meso-pleuræ, but less closely and not so distinctly. The four front legs are yellow; the femora are more fulvous in tint; the hinder legs are black; the apex of the coxæ, the basal joint of the trochanters and the basal third of the tibiæ, dark rufous; the hinder tarsi yellow. Abdomen ferruginous; the petiole, the second segment above and the apical segment black.

Anisobas cincticornis, sp. nov.

Rufo flagello antennarum nigro, medio albo annulato; alis hyalinis, nervis stigmateque nigris, ♀.

Long: 10 mm.

Hab. Sarawak, Borneo (R. Shelford).

Antennæ black; the base rufous; the seventh to the fourteenth joints for the greater part white; the basal joints of the flagellum are rufous below. The front is obscurely punctured; the face is distinctly but not very closely punctured; the clypeus is obscurely punctured above, below smooth and shining; the labrum is fringed with long hair. The mesonotum is darker coloured than the rest of the thorax and is shagreened; the scutellum is thickly covered with longish black pubescence. The basal three areæ of the median segment, are smooth and shining; the others are closely, rugosely punctured; the posterior median is smooth, with the sides slightly striated; the lateral teeth are large, and narrowed gradually towards the apex. Propleuræ punctured above; the apex irregularly striated in the middle;

the base and the lower half of the mesopleuræ closely, but not strongly punctured; the middle longitudinally striated; the metapleuræ punctured at the base, the rest closely longitudinally striated. Legs coloured like the body, the hinder tarsi black. The base of the wings have a fulvous tinge. Abdomen shining, the middle segments aciculated; the gastrocœli are smooth, shallow.

It is doubtful if this is a true *Anisobas*. The antennæ are stout and are slightly thickened towards the apex; the basal joints of the flagellum are all much longer than broad; the face is obliquely narrowed from the top to the bottom; the labrum projects and is narrowed towards the apex; the keel on the propleuræ (characteristic of typical *Anisobas*) is stout; the scutellum is obliquely raised, the sides stoutly keeled and the apex at the top depressed; the median segment is completely areolated; the areola is longer than wide, is not much narrowed towards the apex and rounded backwards at the base and apex; the sides are stoutly spined. The wings are as in *Ichneumon*. The abdomen is not much longer than the head and thorax united; there are seven segments; the last is large, above nearly as long as the sixth; the ovipositor largely projects.

Bodargus, gen. nov.

Eyes placed high up, separated by their own length from the base of the mandibles. Face and clypeus forming almost one piece; the suture separating them being almost obsolete; the foveæ are shallow; apex of clypeus transverse, its sides broadly rounded. Occiput deeply emarginate. Antennæ shorter than the body, serrate. Scutellum roundly convex; the sides stoutly keeled. Median segment depressed at the base; the areola is faintly indicated, is twice longer than broad, is open at the base and is gradually narrowed towards the apex; the other areæ are obsolete, except on the apical slope where there are three. Areolet much angled, narrowed at the top. The transverse basal nervure is interstitial; there is a short nervure on the cubital-disco nervure and a longer more distinct one on the recurrent; the transverse median nervure in the hind wings is broken far below the middle. Legs short; the hinder femora do not reach much beyond the apex of the second segment. The middle segments of the abdomen slightly project at the apex; they are closely punctured; the last segment is as long as the penultimate. The main characteristics of this genus are the flat face, continuous with the clypeus, the indistinctness of the keels on the median segment; the short legs and the large, roundly convex, sharply keeled scutellum.

Bodargus rufus, sp. nov.

Ferruginea, apice femorum posticorum, basi tibiarum, apice late apiceque tarsorum posticorum nigris ♂.

Long: 15 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ dark rufous, darker towards the apex; the scape is yellow. Head uniformly coloured; the face and base of clypeus closely punctured; the vertex is more closely and strongly punctured; the ocellar region black. Mesonotum closely and distinctly punctured; the scutellum is more strongly and not quite so closely punctured, except on the basal slope. The median segment is rugosely punctured, except on the basal slope; on the apex it is transversely striated. Legs coloured like the body; the apical fourth of the hinder femora, the base of the tibiæ narrowly and their apex broadly, the apex of the metatarsus, the apical half of the second joint and the whole of the others, black. Wings hyaline, the stigma and nervures fuscous-black. Abdomen coloured like the thorax; the fifth, sixth and base of seventh blue-black; the apical half of seventh white.

Diapetus, gen. nov.

Median segment smooth and shining; its base broadly depressed in the middle; there are two stout, transverse keels. Prothorax with a stout, oblique keel above the middle; its base sharply keeled. Areolet minute, not clearly defined through the cubital and radial nervures uniting; the apical abscissæ of the radius and the cubitus spread out obliquely from it. Parapsidal furrows deep, uniting at the apex into one short, wide furrow. Metathoracic spiracles large, linear. Petiole curved, not much narrowed at the base; the spiracles are placed close to the middle, nearer the apex than to the base.

The antennæ are longer than the body, are filiform, and have the third joint distinctly longer than the fourth; the clypeus is roundly convex and is separated by a deep furrow from the face; the mandibles have two unequal teeth; the meso-pleural furrow is wide and deep and is interrupted in the centre. The transverse median nervure is received behind the transverse basal; the stigma is narrow, lanceolate in the hind wings; the cubital nervure is broken above the middle. The legs are long and slender; the claws moderate in size, the hinder tarsi are longer than the others. The abdomen is bluntly pointed and the last segment is larger than the penultimae.

This genus may be referred to the *Cryptinas*, but it does not quite agree with that group, as the spiracles on the petiole are placed near the middle. The small, or more correctly, obsolete areolet might place it in the *Mesostenini;* but there is no known genus in that group in which it could be placed.

Diapetus nigroplagiatus, sp. nov.

Rufo-fulvo, vertice, mesonoto, metanoto, pleuris abdomineque late nigro-maculatis; alis flavo-hyalinis, nervis stigmatique testaceis ♀.

Long: 12; terebra 2 mm.

Hab. Borneo (Shelford).

Antennæ longer than the body, darker towards the apex. Head smooth and shining; the vertex and upper part of the occiput largely black; the front is broadly dark rufous in the middle. Face and clypeus yellowish, smooth and shining, sparsely covered with long black hair. Mandibles broadly black at the apex, yellow at the base, rufous in the middle. Thorax smooth and shining except the apex of the middle lobe and the furrows. Scutellum and post-scutellum yellow. The base of the median segment is black except in the middle depression; between the two keels are two large black marks, rounded and narrowed at the apex; the basal two-thirds of the mesopleuræ black; the middle of the metapleuræ broadly, and the greater part of the mesosternum black. Legs coloured like the body; the hinder femora are darker coloured at the base; the tarsi are minutely spinose. Wings yellowish-hyaline; the stigma testaceous; the nervures are of a darker testaceous colour. The petiole i lighter in colour than the other segments; its central region is broadly black except narrowly down the middle; the second segment is black at the base to near the middle; the third has the basal third black; the fourth and fifth are more narrowly black at the base. On the metapleuræ are, in the middle, four short stout keels; the middle two are longer than the others.

Acleasa, gen. nov.

Median segment reticulated all over, without transverse keels; the apex with two large conical teeth. Thorax about three times longer than broad; the mesonotum with indistinct parapsidal furrows, and coarsely reticulated. Metapleural keels absent. Areolet large, wider than long, of equal width throughout; the transverse cubital nervures slightly oblique; the apical one distinct; the transverse median nervure is received behind the transverse basal; the transverse median nervure in hind wing broken shortly below the middle. Legs of moderate length; the basal joint of the hinder tarsi is thickened; the claws are small. The petiole becomes gradually wider towards the apex; its sides near the middle on the lower side project into a stout triangular tooth, the part behind this being keeled; in front of it is a rounded tubercle. The head is rather narrow; the eyes are large and projecting; the front is stoutly striated in the middle; the front and vertex are depressed; the eyes project above the vertex; the sides of the pronotum are indistinctly toothed at the base; they project at the tegulæ; the scutellar depression is larger and deeper than usual and bears four longitudinal keels.

A distinct genus of *Mesostenini* easily known by the completely reticulated median segment without transverse keels, by the stoutly spined petiole, by the raised scutellum, by the coarsely reticulated thorax, and by the thickened base of the hinder tarsi.

Acleasa albispina, sp. nov.

Nigra, scutello spinisque albis; abdomine rufo-balteata; pedibus flavis, coxis, trochanteribus posticis apice femorum posticorum apiceque tibiarum posticarum nigris; alis hyalinis, nervis stigmatique nigro-fuscis ♀.

Long: 12; terebra 2 mm.

Hab. Borneo (Shelford).

Antennæ stout, longer than the body; the ten middle joints white. Head black; the face and clypeus thickly covered with long white hair; the middle is irregularly striated. Clypeus roundly convex, shining; its upper part closely and finely punctured. The middle of the front is stoutly irregularly striated, more closely below than above. Mandibles rufous, their teeth black. Thorax black; the scutellum and teeth yellow. The middle lobe of the mesonotum is closely transversely striated, the lateral are coarsely irregularly reticulated and hollowed down the centre. Scutellum yellow, black at the base; smooth and shining; the basal depression is large; it has two stout complete keels in the centre, and an indistinct one on either side. Post-scutellum smooth and shining; its apex is dilated. Median segment coarsely, closely reticulated; the spines are large, conical and lemon yellow. Pro- and upper half of the mesopleuræ coarsely, irregularly striated; the lower part of the meso- smooth and shining; the furrow is crenulated. Metapleuræ closely reticulated. Legs yellow; the hinder coxæ, except the basal two-thirds above, the trochanters, apical third of femora, the extreme base of the femora and their apex more broadly, black. Abdomen black, the base of the petiole, its apex somewhat more narrowly and the apex of the other segments, yellow; the post-petiole is punctured and striated down the middle; the second, third, and fourth segments are closely punctured.

Fislistina, gen. nov.

Post-petiole much widened and clearly separated; its spiracles wider from each other than from the apex. Median segment rugose and reticulated; its sides bearing short thick spines; the spiracles large, oblong. Areolet small, square, open at the apex; the transverse basal nervure is insterstitial; the transverse median nervure in hind wings broken below the middle; the stigma narrow, linear; below it, is a wide cloud. Antennæ stout, longish, annulated with white; the third and fourth joints subequal in length. Head as wide as the thorax; almost transverse and not much developed behind the eyes, which are large and parallel; the malar space is small. Clypeus clearly separated from the face, roundly convex; its apex depressed. Mandibles large, wide; their apex with two equal triangular teeth. Parapsidal furrows extending beyond the middle. Scutellum roundly convex; the basal depression wide and deep. The metapleural furrow is wide, deep and reaches to the apex; there is only a basal keel on the median segment; the legs are stout and of moderate length; the fore tarsi are longer, the four hinder shorter, than the tibiæ; the fore tibiæ are distinctly narrowed at the base; the claws longish, curved. There are distinct gastrocœli on the second abdominal segment; the apical segment is transverse, bluntly pointed and bears distinct cerci.

Belongs to the *Mesostenini* and is most nearly related to the American genera *Mesostenoideus* and *Christolia.*

Fislistina maculipennis, sp. nov.

Nigra, abdomine late flavo-balteata; pedibus rufi; tibiis late apiceque femorum posticorum nigris; alis hyalinis, fascia substigmatali fusca ♀.

Long: 10; terebra 2 mm.

Hab. Borneo (Shelford).

Antennæ stout, longer than the body, black with two white bands, one on joints 6-10 and another on joints 13 to 16. Head entirely black; the face rugose, roundly projecting in the middle; the front smooth; the lower part of the vertex stoutly, longitudinally striated. Mesonotum smooth and shining, the furrows appear to bear a silvery pubescence. Scutellum smooth, yellow; the basal depression has four keels. Median segment coarsely reticulated; the basal region in the middle smooth; the teeth are yellow, short and broad. The upper part of the propleurae closely obliquely striated; the middle less closely and more strongly longitudinally striated; the basal half of the mesopleurae is closely longitudinally striated; the apical smooth and shining; the metapleurae coarsely rugose. Wings hyaline, a broad fuscous cloud extends from the stigma to the opposite side. Legs rufous; the tibiæ and tarsi paler, the hinder white; the greater part of the four front tarsi, the four front tibiæ in front, the apex of the hinder femora, the tibiæ, except at the base, and the apical joint of the hinder tarsi, black. On the abdomen, the post petiole, the apex of the second segments, the band roundly widened backwards in the middle, a broad band on the third segment, widest in the middle, and the greater part of the penultimate segment, yellow. The gastrocœli are rufous.

Chrysocryptus, gen. nov.

Head and thorax densely covered with longish hairs, the abdomen sparsely haired. Median segment areolated; the transverse and longitudinal keels distinct; the areola large, twice longer than wide. Stigma conspicuous, wide, obliquely narrowed towards the base and apex. Areolet large, wide, not much narrowed above, five-angled. Radial cellule wide; the basal abscissa of the radius shorter than the apical and more curved than it; there are no nervelets on the disco-cubital and the recurrent nervures; the transverse basal nervure is interstitial. In the hind wings the cubitus is broken shortly below the middle. Head, if anything, wider than the thorax; the occiput rounded; eyes large, distinctly projecting; the malar space small. The middle lobe of the mesonotum is distinctly separated; the parapsidal furrows are deep and reach near to the scutellum. The furrow at the bottom of the mesopleuræ is distinct. The spiracles are linear; the spiracular area is well defined, as is also the area at its apex. The base of the metanotum is obliquely depressed. Ovipositor projecting; the sheaths are covered with longish white hair. Legs slender; the hinder coxæ and trochanters longish; the fore tarsi are longer than the tibiæ.

The first three joints of the antennæ are much lengthened, being fully four times as long as wide at apex, or longer; the abdomen is twice the length of the head and thorax united; the disco-cubital nervure is roundly curved, not angularly broken; the clypeus is roundly convex; its apex broadly rounded. The face is densely covered with golden hair. The median segment is completely areolated; the areæ are all large and have stout keels; the areola is rounded at the base, transverse at the apex; the lower part of the metapleuræ is stoutly keeled; the radius is thickly pilose at the base; the apical nervures in the hind wings are faint and incomplete; the second transverse cubital nervure is bullated largely above.

This genus does not fit well into any of the known tribes of the *Cryptina.* The areolated median segment would place it near the *Hemitelini* and the *Phygadenonini.* Characteristic is the densely haired head and thorax.

Chrysocryptus aureopilosa, sp. nov.

Niger, capite thoraceque dense aureopilosis; abdomine pedibusque posticis rufo-testaceis; pedibus pallide testaceis; alis hyalinis, apice fumatis; stigmate nervisque testaceis ♀.

Long: 12; terebra 4-5 mm.

Hab. Borneo (Shelford).

Antennæ rufo-testaceous; the scape paler, and thickly covered with pale testaceous hair. Head black, smooth and shining densely covered with longish bright fulvous hair. Mandibles rufo-testaceous; the teeth black. Legs rufo-testaceous, the anterior paler; the hinder tarsi infuscated; they have the coxæ, trochanters and femora covered with long pale hair; the tibiæ and tarsi are closely covered with short pubescence. Wings hyaline; the apex infuscated; the basal nervures are dark; the apical, pale testaceous. The apex of the abdomen is pale testaceous, the basal three segments are sparsely covered with long pale hair.

Latteva, gen. nov.

Median segment not areolated; the base smooth; the rest striolated; the sides spined. First joint of the flagellum, if anything, shorter than the second. Antennæ over twenty-jointed Eyes large, parallel, reaching close to the eyes; the hinder ocelli are separated from each other by about the same distance they are from the eyes. Pterostigma elongated, narrow; areolet small, square, open at the apex; the transverse median nervure is received behind the transverse basal. Radial cellule elongate, narrow, sharply pointed at the apex, the apical abscissa of the radius is not twice the length of the first; the nervures in the hind wing are complete; the transverse median nervure in the hind wings is sharply angled below the middle where the cubital nervure issues from it. Metathoracic spiracles small, twice longer than wide. Belongs to the *Hemelitini.* The nonareolated strongly striolated median segment affords a good mark of recognition. The head is dstinctly wider than the thorax; the clypeus is clearly separated from the face: the mandibles are large, broad and bi-dentate at the apex; the parapsidal furrows only extend to shortly beyond the middle of the mesonotum; the scutellar depression is deep, wide and keeled; the base of the mesopleurae is keeled; the petiole is longer than the second segment; the post-petiole is distinctly separated.

Latteva albobalteata, sp. nov.

Nigra, abdomine albo balteato; pedibus testaceis; tibiis, tarsis trochanteribusque posticis nigris; tibiis posticis albo annulata; alis hyalinis, fusco-bifasciatis ♀.

Long: 8 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ black, the eighth to sixteenth joints white beneath; the scape is brownish on the under side. Head entirely black; the front is keeled down the centre; the keel on either side is oblique. Face opaque, alutaceous; the clypeus bare, smooth and shining. Mandibles black, rufous in the middle. Maxillary palpi white. Thorax black, except the scutellum which is broadly yellow in the middle; the apex of the middle lobe of the mesonotum is rugose. The median segment behind the keel is smooth; the middle is obliquely-longitudinally striated; the apical slope is transversely striated, the striæ running into reticulations; the spines are black, longer than broad. The propleuræ obliquely striated in the middle; the middle have a plumbeous hue; they are finely striated below the tubercles, stoutly behind the keel, and closely on the upper part of the depression behind the middle; the lower curved keel has some stout keels on the basal half as has also the apical bordering one. Metapleuræ striated indistinctly at the base and much more strongly towards the apex; the oblique furrow behind the middle is broad and deep. The anterior four legs are testaceous, paler, more yellowish at the base; their tarsi fuscous; the hinder pair are black; the femora rufous, black at the apex; the coxæ are pale rufous; there is a narrow white band near the base of the tibiæ; the apical joints of the tarsi are testaceous at the base. Wings hyaline; there is a fuscous cloud at the stigma extending from the base of the cubitus to the apex of the areolet; there is another fuscous cloud at the apex. Abdomen black; the petiole is rufous, with a broad fuscous band near the base of the post-petiole; the apical third of the second segment and the apical two segments are white.

Friona, gen. nov.

Radial cellule elongate. Areolet moderately large (larger than in *Mesostenus*) wider than long; the cubital nervures parallel, straight, not oblique; the second faint; the transverse basal nervure interstitial or nearly so. The transverse median nervure in the hind wings is broken far below the middle. Head wider than the thorax; the front is stoutly striated and is depressed in the middle. Eyes large, parallel; the malar space is moderate. Face short, not extending below the level of the eyes. Clypeus roundly convex, clearly separated behind; its apex broadly rounded; labrum projecting. Mandibles with two large triangular teeth. Thorax more than three times longer than broad; pronotum dilated in front; the parapsidal furrows deep, extending beyond the middle. Median segment elongate, its base smooth; there is a transverse keel near the base, the part beyond it is closely transversely striated; the apex of the segment has a straight, steep slope and projects bluntly at the edges above; the spiracles are small, about three times longer than broad. Legs longish, slender; the fore tarsi are twice the length of the tibiæ. Antennæ longish, slightly, but distinctly, dilated at the middle; the third joint is longer than the fourth.

Has the usual form and colouration of the *Mesosteni*. The generic distinctions lie in the strongly striated depressed front and the transversely striated median segment, with its steeply sloped, clearly separated apex.

Friona striolata, sp. nov.

Nigra, late flavo maculata; mesopleuris fere immaculatis; pedibus fulvis, posticis nigro-maculatis; alis hyalinis nervis stigmatique nigris ♀.

Long: 13-14; terebra 4 mm.

Hab. Sarawak, Borneo (Shelford).

The sixth to seventeenth joints of the antennæ are white. Head black; the face, clypeus, labrum, inner orbits to the end of the eyes, the outer from shortly above their middle, almost the basal two-thirds of the mandibles and the palpi, yellow; the front in the centre is strongly obliquely striolated; the face is rugosely punctured. Thorax black; the projecting middle of the pronotum, the tubercles, tegulæ, the scutellums, a large raised mark, narrowed on the inner side behind the hind wings, and a small curved mark behind the mesopleural suture, pale yellow. Pro- and mesonotum smooth and shining; the pro- and mesopleuræ closely longitudinally striated, the striæ becoming weaker somewhat towards the apex. The part of the median segment immediately behind the transverse keel is coarsely aciculated; the rest is closely and distinctly transversely striated; shortly behind the transverse keel a broad yellow band originates, which becomes broadly dilated on the apical slope, where it extends to the middle, its sides being dilated, and the centre rounded. Legs fulvous; the four front coxæ and trochanters are pale yellow; the fore femora are lined with black above; the hinder coxæ are black, yellow above and at the apex below; the trochanters, apex of femora and of tibiæ black: the tarsi white. Abdomen black above; all the segments with their apices yellow, the apical one very narrowly.

Lactolus, gen. nov.

Median segment elongate, with one transverse keel; its base smooth, the rest closely transversely striated; its apex has a gradually rounded slope; the keel on the lower part of the metapleuræ is complete and is roundly and broadly dilated at the base. Front and vertex depressed, stoutly striated. Areolet of moderate size, longer than broad; the transverse cubital nervures have an oblique slope from the top to the bottom; the apical one is faint; the transverse basal nervure is almost interstitial.

There is only one transverse keel on the median segment; its spiracles are of an elongate oval slope; the clypeus is not separated from the face; the thorax is more than three times longer than broad; the legs are long; the claws longish; the hinder coxæ are long and reach near to the apex of the petiole; the spiracles on the petiole are separated from each other by about half the distance they are from the apex; the scutellum is stoutly keeled laterally to near the middle, the parapsidal furrows extend to shortly beyond the middle. The ♂ is similar to the ♀; the antennæ are longer and more slender, they are broadly ringed with white in both sexes; the apical abdominal segments in both sexes are marked with white.

The species of the genus are very similarly coloured to *Buodias* with which genus it agrees in some other respects; the difference in the form of the median segment enables them to be separated; in *Buodius* it is shorter, is stoutly spined, and the apex has a straight oblique, not a gradually rounded slope; in *Buodius*, too, the recurrent nervure is received at the apex of the areolet, almost united to the second transverse cubital nervure. Also the median segment is not transversely striated.

Lactolus albomaculatus, sp. nov.

Niger, annulo flagello antennarum tarsisque posticis albis; coxis posticis rufis alis fumato-hyalinis, nervis stigmatique nigris ♀.

Long. 13; terebra 3 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ longer than the body; the sixth to twelfth joints, for the greater part, white. Face rugosely striated in the middle; at the sides the striæ are oblique and more distinctly separated. Clypeus stoutly keeled in the middle; the rest aciculated and irregularly and not very strongly striated. The base of the mandibles closely striated; the teeth are for the greater part rufous. The front and the vertex from the hinder ocelli stoutly striated. Thorax shining; the pro-mesonotum and the base of the median segment smooth, striated. The mesopleural furrow is wide and deep; its lower part is stoutly striated. Legs black; the apical half of the metatarsus, the second and the fourth joints except at the apex, white; all the coxæ and the four front trochanters bright red; the anterior tibiæ and, to a less extent, the femora are brownish. Wings hyaline, with a slight, but distinct, smoky tinge; the stigma and nervures are black; the second transverse cubital nervure is largely bullated ; as is also the cubital-disco, and the recurrent nervures. Abdomen black ; the top of the sixth, seventh, and the eighth segment more narrowly above, white ; the apex of the second segment is obscure testaceous.

Lactolus ruficoxis, sp. nov.

Niger, apice metanoti apiceque abdominis albis ; pedibus fulvis, trochanteribus tibiisque posticis nigris ; tarsis posticis albis ; alis hyalinis, nervis stigmatique nigris ♀.

Long : 9-10 ; terebra 4 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ as long as the body ; the middle of the flagellum is broadly white. The face is rugosely punctured, almost reticulated ; the clypeus is smooth and shining, roundly convex ; the curved keels on the lower part of the vertex are few in number and stout. Mandibles black ; the palpi white. Mesonotum smooth and shining, except on the apex of the middle lobe, which is transversely striated. The scutellar depression is large and is stoutly keeled in the middle ; the top of the scutellum is obscure brownish ; the post-scutellum is white. The median segment at the base is smooth and shining ; the rest of it, from the keel, is closely transversely striated ; its apical slope is white ; this white band is directed broadly backwards in the middle. The upper half of the propleuræ is closely, longitudinally reticulated, the lower strongly longitudinally striated. Mesopleuræ, except in the middle behind, strongly longitudinally striated ; the base is smooth below ; the striæ in the middle are smaller and closer ; the metapleuræ, from the oblique keel, longitudinally striated ; the striæ are waved. Legs fulvous, the anterior paler in tint ; the hinder trochanters, the apex of the femora, the tibiæ and the base of the tarsi are black ; the rest of the tarsi white. Abdomen black ; the apical three segments white ; the basal three segments are aciculated.

Lactolus flavipes, sp. nov.

Niger, annulo flagello antennarum late, abdominis apice tarsisque posticis albis ; pedibus anterioribus flavis ; alis hyalinis, nervis stigmatique nigris ♀.

Long: 10 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ black; the apex of the fifth, the sixth to eleventh entirely, and the twelfth and thirteenth partly, white. Head black, the inner orbits in the middle narrowly white; the face rugosely punctured, the punctures running into reticulation above. Clypeus roundly convex, smooth and shining and sparsely covered with longish hair. Mandibles rufous before the middle, smooth; the base coarsely aciculated. Front irregularly striolated, coarsely in the centre, more finely in the middle. Pro- and mesonotum with the scutellum smooth and shining; the apex of the middle lobe irregularly longitudinally striated. Median segment behind the keel smooth and shining; the rest of it strongly, transversely, closely striated; on the apex is a curved white band, which is dilated backwards in the middle. Pleuræ closely longitudinally striated; the striæ on the mesopleuræ are more irregular and more or less curved. The four front legs are pale yellow; their coxæ black, rufous towards the apex; their tarsi infuscated; the hinder tarsi are white, except narrowly at the base. The basal two segments of the abdomen are aciculated; the others smooth and shining; the second and third segments are narrowly pale at the apex; the apical three are for the greater part white.

Buodias, gen. nov.

Thorax three times longer than wide; the median segment behind the keel obliquely rugosely striated; its sides with a broad spine; the apical keel is wanting. Front stoutly striated. Petiole not much longer than the second segment, stout, becoming gradually wider towards the apex from the base. Areolet of moderate size, wider than long, wider at the apex than at the base; the recurrent nervure is received close to the apex; the transverse basal nervure is received behind the transverse basal. The petiolar spiracles are nearer each other than they are to the apex. Scutellum flat, keeled on the basal half. Ptero-stigma elongate, narrow. The median segment is about one half the length of the meso-thorax; its apex has an oblique, straight slope; its spiracles are small. about three times longer than broad. The abdomen is stout, not longer than the head and thorax united, its apex is blunt and marked with white. The legs are long and stout; the tarsal claws of moderate length; the tibiæ are slightly bent at the base. The clypeus is roundly convex, not very clearly separated behind; its apex is transverse and has a distinct margin. The mandibles are broad, curved, bidentate at the apex; lower tooth, small; the base is broadly raised on the upper side, the raised part forming a tubercle-like mass. The head is much wider than the thorax; the metapleural keel is complete and is dilated at the base. On the median segment in the middle behind the keel is an incomplete area, open behind.

In Ashmead's arrangement this genus should come near *Mesostenoideus* and *Christolia*.

Buodias ruficoxis, sp. nov.

Niger; annulo flagello antennarum abdominisque apice albis; coxis trochanteribusque anterioribus rufis; alis fusco-hyalinis, nervis stigmatique nigris ♀.

Long: 21 mm. terebra 4-5 mm.

Hab. Sarawak (Shelford).

Antennæ not quite so long as the body, if anything, thickened towards the apex; the sixth to thirteenth joints white beneath; the scape bare smooth and shining. Head entirely black; smooth and shining; the front obliquely stoutly striated below the ocelli; the face coarsely irregularly reticulated. Mandibles black, rufous at the base above. Palpi testaceous. Thorax black; the sides of the scutellum to near the apex white; the spines on the median segment dull white. Pro- and mesonotum shining, bare; the middle lobe aciculated. The scutellum is, if anything, more shining than the mesonotum; post-scutellum is dull white. The base of the median segment in the middle is stoutly keeled; the part behind the keel is aciculated; there is one curved keel on the outer side of the stigma and several on the inner side; the teeth are broad and bluntly rounded at the apex. The middle of the propleuræ obliquely, and the upper two-thirds of the apex stoutly, striated. The base and the part in the middle is irregularly reticulated, this part being bounded by a keel in front and by an irregular furrow behind; the lower apical part is irregularly crenulated.

Metapleuræ coarsely obliquely striated; the striæ are irregular and more or less wrinkled; the base is aciculated behind the furrow, which is wide and deep; the upper part is irregularly, the median segment from the keel finely and closely transversely striated; the apical slope is rufous. The middle of the propleuræ, the greater part of the meso- and the meta- below the keel are closely and finely longitudinally striated. Legs black; the hinder coxæ rufous; the fore femora and tibiæ more or less testaceous, especially in front, the apical two-thirds of the basal joint of the hinder tarsi, the second, third, fourth and base of the fifth joints, white. Wings fuscous-hyaline; the nervures and stigma black; the second transverse cubital nervure is almost obliterated. Abdomen black; the sixth and seventh segments broadly above and the eighth narrowly white.

Mesostenus Shelfordi, sp. nov.

Niger; labro abdominisque apice albis; coxis posterioribus rufis; alis hyalinis, stigmate nervisque fuscis ♂.

Long: 9 mm.

Hab. Sarawak, Borneo (Shelford).

Head black; the labrum and palpi white. Mandibles black, whitish-testaceous near the middle. Face opaque, closely but not very distinctly, punctured; the clypeus smooth and shining. front and vertex alutaceous, shagreened; the upper part of the front is furrowed in the centre. Pro- and meso-thorax smooth and shining and with a plumbeous hue. Median segment opaque; above closely, but not very strongly, transversely punctured. Wings clear hyaline; the stigma and nervures fuscous. Legs black; the four posterior coxæ orange red; the front coxæ black, pale at the apex; the four front legs are fuscous; the hinder tarsi are white, except narrowly at the base. The abdominal segments are narrowly lined with dull white at the apex; the apex of the fifth and the sixth and the seventh entirely, are clear white.

This is a *Mesostenus* as defined by Ashmead in his generic revision of the *Ichneumonidæ* (Bull. U. S. Nat. Mus. XXIII. 44)—The keel on the mesopleuræ curves broadly and roundly upwards on the apical half; the basal keel on the median segment is complete; the apical one does not reach to the sides; the keel on the lower edge of the metapleuræ is broad and plate-like; the transverse median nervure is received shortly behind the transverse basal; the areolet is moderately large, about one half longer than broad; the recurrent nervure is received shortly behind the middle.

LISTRODROMINI.

Maraces, gen. nov.

Claws pectinated, scutellum flat throughout, its sides and apex keeled. Areola obliquely narrowed behind, open in front, not separated from the posterior median area; it is separated at the base from the lateral area. Antennæ dilated beyond the middle. Labrum hidden. Areolet narrowed at the top, nervure uniting there; the transverse median nervure is widely distant from the basal. The apex of the hind femora reaches to the middle of the fourth segment; the abdominal segments are aciculated.

The pronotum projects above, broadly at the base, more narrowly at the apex; the apex of the scutellum has a perpendicular slope and is clearly raised above the post-scutellum; the abdominal segments do not project much at their apices. The stump of a nervure on the disco-cubital nervure is almost obsolete. Clypeus separated from the face, foveate at the base. Mandibles large; the teeth large, widely separated. Metathoracic spiracles linear, much longer than wide.

The eyes are large and parallel; the malar space is large. There are seven abdominal segments; the ventral keel is on the third and fourth segments. The occiput is roundly incised and is keeled above. Median segment, short, rounded gradually behind.

The pectinated claws refer this genus to the *Listrodromini*. The claws have long teeth and are toothed uniformly to near the apex. There are no spines on the median segment; the spiracles on the first abdominal segment are elongated; the segments are banded with yellow; the ovipositor projects largely.

Of the known genera of *Listrodromini*, *Maraces* comes nearest to *Neotypus* which, among other differences, is readily separated from it by the very small, rounded spiracles of the petiole. If it were not for the pectinated claws the genus might be placed with the *Joppini*.

Maraces flavo-balteata, sp. nov.

Niger, late flavo-maculato; pedibus flavis, coxis trochanteribus femoribusque posticis nigris; apice tibiarum posticarum late nigro; alis hyalinis, nervis stigmatique nigris ♀.

Long: 14 mm. ♀

Hab. Sarawak, Borneo (Shelford).

Antennæ black, the middle of the flagellum broadly banded with white. Head black; the face, except for a broad black line in the middle, the clypeus, the inner orbits narrowly to the top of the eyes on the inner side, and the outer, entirely below and broadly above, pale yellow. The face closely, the clypeus sparsely, punctured. Mandibles black. Front and vertex impunctate, bare, shining. Thorax black; the edge of the pronotum, two marks on the mesonotum, obliquely and sharply narrowed at the base, the apex of the scutellum broadly, the mark narrowed behind the apical part of the scutellar keels, the post-scutellum, two marks on the apex of the median segment, narrowed below as they follow the outline of the lateral areæ, the lower part of the propleuræ, of the mesopleuræ more broadly, the tubercles, the hinder edge of the mesopleuræ, and the apical half of the metapleuræ, yellow. Mesonotum closely rugosely punctured, reticulated in the middle behind; the scutellum is similarly punctured. The base of the median segment is smooth; the areola is coarsely sharpened; the posterior area coarsely irregularly reticulated; the lateral area smooth at the base, the rest coarsely punctured; the spiracular area rugose, the apex transversely, coarsely striated. The upper part of the propleuræ is closely punctured, the apex stoutly striated, the striæ in the centre extending to the centre. Meso- and metapleuræ distinctly and closely punctured; the middle of the former finely and closely longitudinally striated. Wings hyaline, the nervures and stigma black. The four front legs yellow; the femora, tibiæ and tarsi black behind; the hinder coxæ, except at the apex on the inner side, the basal joint of the trochanters, the femora and the apical third of the tibiæ, black; the rest yellow. Abdomen black; the base of the petiole broadly, its apex and the apex of all the other segments, yellow; the middle segments of the abdomen are closely punctured; the gastrocoeli are yellow, the steep apex of a more rufous hue; the base of the segment between them is striated; the sides of the apical three segments are yellow, the yellow becoming gradually broader towards the apex.

√ *Maraces pectinata*, sp. nov.

(Niger, late flavo ornato; pedibus fulvis, coxis trochanteribusque anterioribus flavis, posticis nigris; alis fulvo-hyalinis, nervis, stigmatique nigris ♀.

Long: 17 mm.

Hab. Khasia Hills (Coll Rothney).

Antennæ black, the eighth to sixteenth joints white; the scape covered with white hair. Head black; the face, clypeus, the inner orbits,—narrowly below, more broadly above, the yellow not extending beyond the inner top of the eyes,—and the outer orbits entirely, from above the middle of the eyes to the base of the mandibles, pale yellow. The face and clypeus obscurely punctured and thickly covered with white hair; there is a black line down the face and an elongate mark on the apex of the clypeus. Front and vertex smooth, shining, and bare. Mandibles yellow, the teeth black. Thorax black; the edge of the pronotum, two lines on the mesonotum, obliquely narrowed on the inner side at the base, the apical half of the scutellum, the mark roundly narrowed at the base, the base of the pronotum, the lower side of the propleuræ from behind the middle to the apex, the tubercles, a small mark on the middle of the mesopleuræ, a smaller one behind it lower down, the lower third of the mesopleuræ, the apex of the mesopleuræ broadly below the keel, yellow. Legs fulvous; the four front coxæ, trochanters pale yellow; the hinder coxæ black on the outer side and on the outer half of the top; the basal joint of the trochanters black, wings hyaline, the base with a slight fulvous tinge; the stigma and nervures black; the areolet oblique; the second transverse cubital nervure longer and with a more oblique slope than the first; they almost touch above; the recurrent nervure is received shortly behind the middle. Abdomen black, the apices of all the segments yellow; the band on the third is interrupted in the middle; the petiole shining, the base of the post-petiole strongly punctured: the second, third, fourth segments closely punctured; the gastrocoeli narrow, deep, smooth, and shining. Mesonotum rather strongly and closely punctured; the scutellum is as strongly, and more widely punctured; its sides, under the keels, strongly but not closely, punctured. The base of the median segment is smooth; the rest coarsely punctured, the apex especially in the middle, closely reticulated; the supramedian area large, about as wide as long; the sides at the base obliquely narrowed, the middle straight, the apex is not clearly separated from the posterior median by a keel. Pro- and mesopleuræ smooth; the depression on the former stoutly striated; the lower half of the meso- is depressed and separated from the raised upper half; the meta- closely and strongly punctured. The median segment is thickly covered with white hair.)

♂

Joppini Zonojoppa, gen. nov.

Antennæ short, distinctly dilated and compressed between the middle and the apex; the dilated joints hollowed laterally. Wings violaceous throughout; the areolet is narrowed at the top, the transverse cubital nervures almost uniting there; the transverse basal nervure interstitial. Scutellum roundly convex; not raised above the level of the mesonotum, its sides stoutly keeled. Areola widely separated from the base of the segment, rounded and narrowed behind, the basal half deeply hollowed, the lateral basal areæ clearly separated. Clypeus broadly rounded at the apex, the labrum hidden. Legs short; the apex of the hinder femora not extending beyond the apex of the third segment. The abdominal segments do not project much laterally at the apex; the second and third segments are longitudinally striated at the base, the last (seventh) segment is well developed; its cerci are much longer than usual.

The thorax is shorter than the basal three segments of the abdomen; the middle of the mesonotum is raised and separated in front; the post-scutellum is shortly striated and depressed laterally; the apical three areæ on the median segment are closely defined, as is also the spiracular area; the sides of the mesonotum are bordered by a wide deep furrow; there is a short stump of a nervure on the disco-cubital nervure.

The characteristic features of this genus are the violaceous wings, the stoutly keeled scutellum, and the excavated areola.

Zonojoppa violaceipennis, sp. nov.

Nigra, capite thoraceque flavo maculatis; abdominis basi late rufo; pedibus nigris; coxis trochanteribusque anterioribus flavis, alis violaciis, nervis stigmatique nigris ♀.

Long. 15 mm.

Hab. Sarawak (Shelford).

Antennæ black, the scape yellow beneath. Head black; the face, clypeus, base of mandibles, the inner orbits to shortly beyond the ocelli, the outer more broadly from near the top, the line becoming gradually wider from top to bottom, pale yellow. Front and vertex smooth, bare and shining; the black on them has a plumbeous hue, and they are sparsely covered with pale hair. Thorax black; the upper edge of the pronotum from near the base (the yellow with a black band in the middle), the keels of the scutellum from near the base, the apex of the post-scutellum; the base of the prothorax from the keel on the pleuræ, the tubercles and a large mark on the lower part of the mesopleuræ at the base, yellow. Mesonotum in the middle stoutly punctured; the punctured space prolonged laterally at the base; the sides near the tegulæ are deeply furrowed. The scutellum, except at the base, is irregularly and rather strongly punctured; the sides are stoutly keeled; in the centre of the post scutellum are four stout keels. The central basal depression of the median segment is smooth; the sides are strongly punctured; the areola has a large, round depression at the base, which extends to shortly beyond the middle; the apical central area is smooth and depressed at the base; the rest of it stoutly transversely striated; the lateral stoutly, irregularly striated, almost reticulated; the spiracular, beyond the spiracles, irregularly obliquely striated. The lower part of the propleuræ is aciculated and irregularly striated; the meso-, except behind, finely and closely punctured; the meta- closely and coarsely striated; the meso- and metapleuræ are thickly covered with white hair. The four anterior coxæ entirely, the trochanters, the femora, except at the base, and the tibiæ and tarsi in front, pale yellow, black behind; the legs black; the coxæ above, except at the base, the apical half of the trochanters, a line on the femora above and on the base of the femora, pale yellow; all the legs are thickly covered with pale pubescence; all the calcaria are pale yellow. Wings uniformly violaceous; the transverse cubital and the recurrent nervures are largely bullated. The basal three abdominal segments and the base of the fourth broadly, ferruginous; the basal three segments are narrowly lined with yellow at the apex. The post-petiole is finely longitudinally striated, the sides punctured; the second and third segments have a narrow keel in the centre, bordered by some longitudinal striations; the gastracœli are large, smooth, and have two oblique stout keels on the outer side.

MUTILLIDÆ.

Mutilla herpa, sp. nov.

Nigra, pro-mesothorace scutelloque ferrugineis; abdomine nitido, dense nigro piloso; segment secunodo dense albo piloso; alis violaceis; tegulis rufis ♂.

Long: 12 mm.

Hab. Sarawak, Borneo (Shelford).

Head as wide as the base of the mesonotum; coarsely rugosely punctured, running into reticulations on the front, which, at the apex, broadly projects; its apex and side are sharply keeled; the middle is obliquely incised; the sides are broadly rounded; the face is rugose and bears, on the middle at the apex, three irregular punctures. Antennæ black, the scape shining, pilose; the flagellum opaque, bare. Pro- and mesonotum, with the scutellum, closely rugosely punctured. The scutellum, is broad; its sides are smooth and project; its apex has a rounded slope. Wings violaceous, lighter in tint at the base; the third transverse cubital nervure is only indicated by a stump on the top; there being thus only two complete cubital cellules; the second transverse cubital nervure is broadly rounded. The median segment is coarsely reticulated; the basal three are of equal length, but the central is much narrower and is acutely pointed at the apex. The pro- and the upper two-thirds of the mesopleuræ are ferruginous; the propleuræ and the base and apex of the mesopleuræ are smooth. Abdomen deep black, shining; the petiole is broad and becomes gradually wider towards the apex; the apex is smooth; at the base of this smooth part is a row of large punctures; from this the petiole slopes obliquely to the base; the ventral keel is straight, rounded at the base and apex; the second segment is covered with short depressed clear white pubescence; and is smooth and shining in the middle at the apex; the pygidium bears large round punctures all over. Legs black, thickly covered with long white hair; the spurs white.

Mutilla ira, sp. nov.

Nigra, dense albo piloso; alis fusco-violaceis, basi fere hyalinis ♂.

Long: 17 mm.

Hab. Sarawak, Borneo (Shelford).

Head distinctly narrower than the thorax; closely rugosely punctured and thickly covered with long white pubescence; the vertex and front with the hair sparser and shorter. The clypeus is smooth and shining and is keeled in the middle; the mandibles, at the base, are thickly covered with long white hair. Thorax densely covered with longish grey pubescence; the mesonotum is strongly, distinctly and uniformly punctured; the furrows are distinct on the apical half. Scutellum strongly, deeply and uniformly punctured and roundly convex; the postscutellum opaque, coarsely aciculated. Median segment coarsely reticulated; the basal median reticulation is twice longer than broad and has the apical half abruptly narrowed. Mesopleuræ coarsely punctured in the middle and thickly covered with grey hair; the lower part of the metapleuræ is alutaceous, the upper punctured. Legs thickly covered with long white hair; the calcaria pale. Wings dark violaceous, paler at the base; the cubital cellules complete; the middle one, is, above and below, longer than the following. Abdomen black, the basal two segments, the basal half of the third rufous; the base of the petiole is broad, more than half the width of the apex; the ventral keel is broadly rounded; the hair is white on the basal segments, shorter and black on the apical two; the hypopygium is punctured, smooth and shining in the middle; there are no keels or furrows on the epipygium.

Mutilla olbia, sp. nov.

Black, densely covered with longish pale hair; the first, second and the base of the third abdominal segment red; wings fuscous-hyaline with a violaceous tinge; the stigma and nervures testaceous, ♂.

Long: 15 mm.

Hab. Penrissen, 4500 feet, Sarawak.

Antennæ densely covered with a pale pile; the second and third joints together are equal in length to the fourth. Head distinctly narrower than the thorax; roundly, obliquely narrowed behind the eyes; the vertex strongly but not very closely, punctured; the front more closely rugosely punctured; the vertex sparsely, the front more thickly covered with long fulvous hair. Clypeus depressed in the middle; the edges rounded and forming a semicircle; the apical tooth of the mandibles is long, rounded at the apex; the subapical one is short and blunt. Thorax thickly covered with long fulvous hair; the pro- and mesonotum closely rugosely punctured; the scutellum is more closely punctured. Median segment closely reticulated; the basal three central areæ larger than the others; the central is longer than the others. Propleuræ at the base rugosely punctured; the lower part of the apex with five stout keels; the central, raised part of the mesopleuræ is punctured but not deeply or strongly; the base of the metapleuræ smooth, the apex reticulated. The third transverse cubital nervure and the second recurrent are faint; the first transverse cubital nervere is oblique and rounded; the second is roundly curved and not obliquely sloped; the second cubital cellule at the top is shorter, at the bottom longer than the third: the recurrent nervures are received near the base of the apical third of the cellules. Legs thickly covered with white hair; the spines and calcaria white. On the abdomen the first, second, and the base of the third segments are rufous; the basal five segments are covered with long pale, the apical with black, hair; the ventral keel is slightly dilated at the base, roundly narrowed at the apex; the last segment above has the apical two-thirds broadly smooth in the middle; below it is strongly punctured, except at the apex, which is smooth and rufous.

Mutilla bagrada, sp. nov.

Long: 16-17 mm. ♂.

Hab. Kuching, Sarawak.

This species comes very near to *M. casiphia*; the differences between the two may be expressed thus:—

Scutellum not furrowed down the middle; the keel on the petiole straight; the face not tuberculate; the propleuræ smooth except above. *bagrada.*

Scutellum furrowed down the middle; the keel on the petiole curved; the face tuberculate below; the propleuræ rugose. *casiphia.*

Flagellum of antennæ brownish beneath, the third and fourth joints equal in length. Front and vertex coarsely rugosely punctured; the punctures running into reticulations on the front; the apex of the tubercles rufous. Clypeus slightly depressed in the middle; smooth, shining; the apex transverse. The face thickly covered with long grey hair. Mandibles at the base thickly covered with grey hair; the subapical tooth is indistinct; the apex of the projection behind the middle is oblique, rounded on the lower part. Pro- and mesonotum closely and rugosely punctured; there is a smooth keel in the middle; there is a furrow on either side of it on the apical half. Scutellum roundly convex, coarsely rugosely punctured. Median segment reticulated; the basal area short, not reaching beyond the middle; its basal third widened. Propleuræ smooth; the upper part at the base bordered by an oblique keel. Mesopleuræ thickly covered with silvery pubescence, the base smooth; there is a wide oblique depression. Legs thickly covered with white hair; the calcaria pale. Wings fuscous-violaceous, paler at the base; the third cubital cellule at the top and bottom distinctly shorter than the second; the first transverse cubital nervure is almost straight, and oblique; the second is roundly bent outwardly in the middle; both the recurrent nervures are received shortly beyond the middle. Abdomen thickly covered with white hair; the hair on the apical two segments is black; the basal two segments and the base of the third are rufous; the ventral keel is roundly curved and narrowed at the base; the last dorsal segment has no area; its lower surface is flat.

Mutilla agapeta, sp. nov.

Black; the abdomen red, with the apical two segments black; the clypeus broadly convex in the middle; the centre of the scutellum smooth and shining, its base depressed; wings fusco-violaceous, hyaline at the base. ♂.

Long: 15 mm.

Hab. Kuching, Sarawak.

The third joint of the antennæ is shortly, but distinctly, longer than the fourth. Front and vertex closely punctured; the vertex sparsely covered with longish pale hair; the front, especially in the centre, thickly covered with silvery pubescence. Face roundly convex, smooth and shining; the clypeus short, depressed, clearly separated, slightly and broadly waved; the edges depressed. Mandibles densely pilose at the base; the lower basal tooth stout, obliquely directed downwards; there is no distinct subapical tooth; the palpi are black. Pro- and mesonotum closely punctured; the pronotum above thickly covered with griseous pubescence; the lower and hinder part of the propleuræ bear stout, clearly separated keels. The raised central part of the mesopleuræ is thickly covered with silvery pubescence and punctured but not very deeply or closely. Metapleuræ smooth, irregularly reticulated at the base above. Mesonotum closely punctured. Scutellum strongly convex: the basal and apical slopes oblique; the base in the centre is flat, smooth and shining. Median segment reticulated, thickly covered with silvery pubescence. Legs thickly covered with white pubescence; the calcaria and spines pale. Wings fuscous-violaceous, hyaline behind the transverse basal nervure; the third cubital cellule at the top and bottom distinctly shorter than the second; the recurrent nervures are received beyond the middle of the cellules; the second transverse cubital nervure is roundly curved outwardly. Abdomen ferruginous; the basal half of the petiole below and the apical two segments black. The ventral keel is almost straight; the last segment is broadly smooth and bare in the centre; below it has the sides broadly, obliquely depressed and clearly separated from the centre which is depressed, especially at the apex, where it is bounded by keels.

Mutilla ilerda, sp. nov.

Black; the prothorax, mesonotum, scutellum and base of median segment rufous; abdomen black, with violet and purple tints; the apex of the second and of the third segments banded with clear white pubescence; wings fuscous-violaceous, lighter in tint at the base. ♂.

Long: 12 mm.

Hab. Kuching, Sarawak.

Antennæ stout, covered with a microscopic pale pile; the third joint is about twice the length of the pedicle and not quite one-half the length of the fourth. Head distinctly narrower than the thorax, thickly covered with long white hair, except on the front and vertex where the hair is sparser, shorter and black. The ocellar region is bounded laterally and below by two stout keels; the space between is depressed; a keel runs into the front ocellus. The clypeus is broadly keeled above: its apex is transverse, with the sides oblique. Mandibles irregularly bidentate at the apex; their base sparsely covered with longish golden hair. The pro- and mesonotum are closely and strongly punctured and covered with golden pubescence. Median segment closely reticulated: the central basal area is twice longer than broad and has the apical half narrowed. Propleuræ closely and strongly punctured except behind; the lower part is bounded by a stout keel: above this, on the apex, are four short keels, which become gradually shorter from the bottom to the top. Mesopleuræ closely and strongly punctured. Metapleuræ reticulated, except behind; on the upper part, at the base, is a narrow keel and above the middle a wide longitudinal furrow. Wings fuscous-violaceous, paler at the base; the third transverse cubital nervure is faint, as is also the cubitus from the second transverse cubital and the second recurrent nervures; the first transverse cubital nervure is oblique, and roundly curved on the lower part; the second is roundly curved outwardly in the middle; the second cubital nervure above is slightly more than one half of the length of the first. Abdomen shining, black; the third and following segments with blue and violet tints; the basal segments sparsely covered with white, the apical more thickly with black, hair; the apex of the second and of the third with a broad band of depressed clear white pubescence; the basal ventral segment has a straight, rounded keel in the centre; its sides are stoutly punctured; its apex has an oblique slope; the pygidium is closely punctured and covered with black hair; its apex is depressed; there is no defined area on it; the epipygium is flat, closely and strongly punctured and has its sides margined.

Comes close to M. *gracillima*, Sm.

Mutilla mamblia, sp. nov.

Black, the scape of the antennæ, the thorax and the femora rufous, two oval spots of silvery pubescence on the base of the second abdominal segment; the whole of the third segment covered with depressed silvery pubescence; the sides of the pygidium fringed with silvery hair. ♀.

Long: 11 mm.

Hab. Kuching, Sarawak.

This species comes near to *M. prosperpina* Sm. which differs from it in having the legs ferruginous except that the knees and tarsi are slightly fuscous; the pubescence on the thorax is reddish-brown. The present species comes close to *M. gispa* Cam. but, apart from the difference in colouration, it may be known from it by the perfectly smooth pygidium.

Scape of antennæ rufous, covered with pale fulvous hair; the flagellum black, stout: the third joint twice the length of the fourth which is shorter than the fifth. Head nearly as wide as the thorax; closely rugosely punctured: the punctures longer than broad; the antennal tubercles black. Face and clypeus smooth and shining, sparsely covered with long pale fulvous hair. Mandibles rufous, black at the apex; the palpi blackish fuscous, darkest at the base; the subapical tooth straight and oblique at the apex. Thorax twice longer than broad, slightly narrowed in the middle; the base rounded with the edge irregular; the apex transverse, the sides above rounded; the sides of the median segment sharply denticulate; the outer edge of the pronotum is stoutly keeled above; the pleuræ smooth, impunctate; the upper part of the thorax is covered with longish black hairs. Legs black; all the coxæ, trochanters and femora, except at the apex, rufous; they are covered with longish white hair; the spines on the four front tibiæ are rufous, on the posterior black; on the tarsi they are rufous, and their basal joints are thickly covered with rufous, stiff pubescence. The basal segment of the abdomen is short and is much narrower than the second; underneath it is rufous, smooth below; the base of the keel obtusely dentate. On the base of the second segment are two irregular, broader than long, marks of silvery pubescence; the third segment is almost entirely covered with silvery pubescence; the pygidium is smooth and is fringed laterally with long silvery pubescence; the ventral segments are thickly covered with silvery hair.

Mutilla palaca, sp. nov.

Antennæ and head black; the thorax red; the abdomen blue, thickly covered with long white hair, without any bands of depressed pubescence; wings uniformly fuscous, with a slight violaceous tinge; the third transverse cubital completely, and the second recurrent nervure almost completely obliterated ♂.

Long: 9 mm.

Hab. Kuching, Sarawak.

Antennæ stout, black, covered with a pale pile; the third joint is slightly, but distinctly, shorter in length than the fourth. Head black, nearly as wide as the thorax; behind transverse, the edge of the occiput sharp and slightly raised above. Front and vertex shining closely punctured all over and covered with longish white hair. Clypeus largely depressed in the centre; the depression largest below, narrowed above; the apex raised and closely punctured. Mandibles bidentate; the apical tooth long and curved at the apex. Thorax entirely rufous, thickly pilose; the hair on the mesonotum fulvous, on the median segment longer and white. Pro- and mesonotum, with the scutellum closely rugosely punctured; the post-scutellum is bordered laterally by a keel and there is a short, less distinct, keel in the centre. Median segment reticulated; the central basal one is very broad at the base, the apex much narrowed; the areæ surrounding it are large. The upper part of the propleuræ is irregularly, indistinctly, punctured; at the apex is an elongated area, rounded below, which reaches to shortly below the middle.

Mesopleuræ closely punctured; the metapleurg reticulated, smooth at the base. Legs black; the calcaria and spines pale; the hair dense, long and white. The second recurrent nervure is narrowed at the top, being there as wide as the space bounded by the first recurrent and the second transverse cubital nervures; the first transverse cubital nervure is straight and oblique; the second is curved and only slightly oblique. The first abdominal segment is broad at the base; below it is flat; its central keel does not project much and the part bordering it is irregularly punctured on either side of it. The last segment above is closely punctured, except for a smooth space in the middle at the apex; below, the apical half is stoutly keeled along the sides.

Agrees closely in colouration with *M. ilerda*, which may easily be separated from it by the keels on the front and vertex.

SCOLIIDÆ.

Scolia (Triscolia) aglana, sp. nov.

Long: 12 mm. ♂

Hab. Sarawak (Shelford).

This species is not unlike what I take to be *S. opalina* Sm., which has also been taken in Borneo by Mr. Shelford. The difference between the two may be expressed thus:—

The frontal area clearly defined bounded by a ridge behind, the hair on the head and thorax black; the median segment punctured throughout. *opalina*, Sm.

The frontal area not clearly defined, not bounded by a ridge behind; the hair on the head and thorax white; the median segment not punctured throughout, there being a wide smooth space on the inner side of the lateral lobe. *aglana*, sp. nov.

Antennæ opaque, bare. Head strongly and closely punctured and thickly covered with long white hair; the middle of the clypeus smooth impunctate; there is no defined frontal area. Mesonotum closely and rather strongly punctured, less closely in the middle. The scutellum and post-scutellum are similarly punctured. The central region of the median segment is bounded by a distinct deep furrow and is punctured, if anything, more strongly than the mesonotum; the inner half of the outer lobe is smooth and impunctate, the outer punctured. The pro- and basal part of the mesopleuræ, are closely punctured; the apical part is smooth in the middle; with a punctured band above and a wider one below. The metapleuræ smooth, with a punctured band round the top; the punctures are smaller than on the mesopleuræ. Wings fuscous, with a distinct, violaceous tinge and highly iridescent. Abdomen black, with a distinct violet iridescence; the hair is black above, white below; the punctuation is distinct. Legs black; the hair is long and white; the fore calcaria are pale; the spines on the fore tarsi rufous.

Scolia (Discolia) ergenna, sp. nov.

Black; the greater part of the clypeus, the pronotum broadly, the scutellum, except at the apex, the post-scutellum, the sides of the metanotum and the apex of the metapleuræ broadly, lemon-yellow, as is also the upper part of the mesopleuræ at the base; abdomen broadly banded with yellow; legs black; the four anterior tibiæ lined with yellow; wings hyaline; the radial cellules infuscated, the stigma and nervures dark rufous ♂.

Long: 13 mm.

Hab. Pankalan Ampat, Sarawak.

Antennæ black; the scape covered with white hair. Head thickly covered with long soft white hair. Except immediately below the ocelli, the vertex is closely punctured; the front ocellus is larger than the hinder pair and is placed in a deep pit; except above, the front is closely and strongly punctured, and has an oblique slope. The face has a smooth, flat keel in the middle and is sparsely punctured; the clypeus is roundly convex, sparsely, and distinctly, punctured; it is yellow, except at the apex, where there is a black line, which is roundly dilated above. The yellow bands on the thorax are broad and of equal breadth throughout; they are united above by a narrow yellow line on the hinder edge of the pronotum. Mesonotum thickly covered with short fuscous hair; the scutellum with longer paler hair. The median segment is thickly covered with long soft white hair; the black central part is depressed; the sides are broadly rounded and project slightly. Mesopleuræ thickly covered with long pale hair; the pro- and metapleuræ shortly pilose. Legs thickly covered with white soft hair; the calcaria black. Wings hyaline; the radial cellules infuscated; the nervures dark rufous; the second transverse cubital nervure is broadly rounded above. Abdomen thickly covered with white hair; the apices of the basal three segments are broadly yellow; the black on the basal segment is triangularly produced in the middle; on the second it is squarely produced, the dilated part being more broadly and more distinctly separated; on the third the black band becomes gradually narrowed towards the apex; on the fourth and fifth the black bands are not dilated and extend to the middle; the apical three segments are entirely black.

Scolia (*Discolia*) *patara*, sp. nov.

Long: 17-19 mm.

Hab. Santubong, Sarawak.

This species comes very near to *D. thyatira* Cam. but the two are, I consider, distinct. *D. patara* is smaller, it wants the curved yellow marks on the top of the clypeus, there is no yellow mark below the antennæ, and the lower part of the radius is broadly rounded outwardly and does not form an angle with the upper abscissa.

Head black, the front, vertex and the upper half of the outer orbits narrowly orange-yellow; the front and vertex thickly covered with long pale fulvous hair; the face more sparsely with long black hair The front and vertex strongly, the face, if anything, more strongly punctured, but not quite so closely; the clypeus is almost impunctate; the occiput is thickly covered with black hair. The orange band on the pronotum is narrowed behind, is broad, and covered with fulvous hair; the mesonotum is sparsely punctured and is thickly covered with short black hair; the scutellum is covered with long black hair except at the apex; the post scutellum is much more sparsely haired. The median segment is thickly covered with long black hair; as are also the pleuræ; the metapleuræ have also a pale pubescence. Wings uniformly fuscous-violet and moderately iridescent. Abdomen, except in the middle, thickly covered with black hair, smooth, shining, and, especially on the middle segments, bearing brilliant blue and violet tints, this being also the case with the ventral surface.

Scolia (Discolia) acutinerva, sp. nov.

Black; the apices of the basal four abdominal segments lined with yellow; the wings yellowish-hyaline, the cubital cellules with a more decided yellow tinge than the rest; the head and thorax covered with a pale golden pile and thickly with pale fulvous hair; the basal three segments of the abdomen have blue and violet tints and are fringed with pale fulvous hair; the hair on the apical segment is long, dense and black ♀.

Long: 23 mm.

Hab. Borneo.

Antennæ black, the scape shining and sparsely covered with long pale fulvous hair. The head, except on the ocellar region, is thickly covered with long pale fulvous hair; the vertex is more sparsely covered than the front; the vertex is shining and is strongly, but not closely, punctured; the front is impunctate and is furrowed down the middle. The clypeus is fringed above with long fulvous hair, is smooth above, the apex is irregularly, stoutly, longitudinally, striated; the extreme apex is depressed, smooth, and more or less piceous. The apices of the mandibles are piceous. The mesonotum is strongly punctured, except in the middle behind; the scutellum is, if anything, more strongly and closely punctured, except at the apex, which is smooth; the post-scutellum is more closely punctured. The golden pile on the median segment is dense, except laterally at the base, it is closely punctured. The golden pile on the pleuræ is very dense. Legs black, covered with fulvous hair. The long spines on the front tarsi are bright rufous; on the four hinder they are of a paler rufous colour; the tibial spines are pale yellowish; the calcaria are of a still paler yellow colour. The malar nervures are rufous; the transverse cubital nervure is sharply bent outwardly in the middle and projects there in a short branch. The abdominal segments are smooth, impunctate and are sparsely covered with long pale fulvous hair; the micaceous tints on the basal three segments are very distinct in certain lights; the hairs on the hypopygium are stout, stiff and black.

The clypeus is subtriangular and is broadly, roundly convex; its apex in the middle is transverse, its sides broadly rounded.

Comes near to *S. indica* Sauss. *sec.* Bingh. Characteristic is the peculiar form of the transverse cubital nervure.

Dielis borneana, sp. nov.

Black; the second and third segments broadly, and the others narrowly on the sides, red; the wings fuscous-violaceous, the apex without a violaceous tinge; the pile on the pygidium golden or rufous; the middle and apical segments of the abdomen fringed with rufous hair.

Long: 45 mm.

Hab. Bajong and Santubong, Sarawak.

Head; the vertex sparsely punctured; the ocellar region more sparsely punctured than the rest; the front is much more closely and strongly punctured and there is a smooth line down the middle. The face and clypeus closely punctured, except for a somewhat triangular large smooth space on the centre of the latter. The occiput is thickly covered with long black stiff hair; the vertex is almost bare; the front is covered with black hair, which has a rufous tinge; the face and clypeus are covered with shorter hair of a darker colour; the sides of the face are thickly covered above with silvery pubescence; the hinder orbits are covered with black hair and with silvery pubescence. Mesonotum strongly and closely punctured except for a smooth impunctate space behind the middle. The scutellum has a punctured, irregular band on the base and an irregular row of punctures before the apex. The post-scutellum is punctured at the base and there is an irregular row of punctures at the apex. The basal region of the median segment is closely and distinctly punctured, except broadly laterally at the base, and more narrowly down the centre; the apical slope is smooth, closely, minutely punctured above and at the sides. Propleuræ closely and rather strongly punctured, except behind; the meso- smooth; the middle thickly covered with black hair; the metapleuræ smooth and almost bare. Legs thickly covered with black hair; the hair on the hinder tarsi bright rufous. Wings fuscous-violaceous; the violaceous tinge absent from the apical portions, which are also lighter in tint; the stigma and nervures black, abdomen black; there are two large rufous marks on the second segment which are narrowed and rounded on the inner side;

the third segment is almost entirely rufous; the fourth and fifth segments are more or less rufous laterally; the apical fringe on the second and following segments is bright rufous; the pygidium is thickly covered with pale golden pubescence, which probably varies in tint.

Comes near to *E. luctuosa* Sm. and *E. 4 guttulata* Burm., but has the abdominal markings red, not yellow. *E. luctuosa* differs from it further in having the wings darker, more uniformly blue-violaceous in colour, in the scutellum and post-scutellum being much more strongly and broadly punctured, the punctuation on the former extending to near the apex, while the latter is strongly punctured at the base and apex.

POMPILIDÆ.

Salius sostratus, sp. nov.

Black; the antennæ, head, pro- and mesonotum, with the scutellum ferruginous, and except the antennæ, thickly covered with golden pubescence; the legs entirely ferruginous; wings entirely flavo-hyaline, the stigma and nervures fulvous ♀.

Long: 22 mm.

Hab. Sarawak, Borneo (Shelford).

Antennæ bare, uniformly ferruginous. Head ferruginous, densely covered with golden pubescence, the lower outer orbits black. The apex of the clypeus is depressed, clearly separated, smooth, bare and broadly rounded; the sides straight and oblique. The apex of the mandibles black, the rest ferruginous; the palpi ferruginous. The eyes distinctly converge above where they are separated by not much more than the length of the fourth antennal joint; the hinder ocelli are separate from the eyes by a slightly greater distance than they are from each other. Thorax black, the hinder half of the pronotum, the mesonotum and the scutellum ferruginous; and the whole is covered with a golden pile. The pronctum is furrowed in the middle: the mesonotum is broadly rounded at the base; it is alutaceous. The scutellum is flat, smooth and is not much raised above the top of the post-scutellum; the latter is broadly rounded from the top to the bottom; the sides of both have a distinct oblique slope (and more particularly the post-scutellum) so that both are narrowed on the top. The part at the sides of the post-scutellum is strongly, but not closely, transversely striated. The median segment has a gradually rounded slope to the apex; the base and apex are smooth; the rest coarsely, irregularly transversely striated. Wings uniformly yellowish-hyaline, the apex not infuscated; if anything paler than the rest of the wing; the stigma and nervures yellowish; the first transverse cubital nervure is obliquely curved; the upper (longer) part has a more sharply oblique slope than the lower; the second is straight and oblique; the third is broadly rounded; the first recurrent nervure is received near the base of the apical third of the cellule, not close to the second transverse cubital nervure as in *Mygnimia;* the first transverse cubital cellule is distinctly longer than the second above, but slightly shorter below; the second recurrent nervure is received at the apex of the apical fourth of the cellule. Legs uniformly ferruginous. Abdomen black; the last segment rufous all round and thickly covered with long rufous hair; the penultimate segment is covered with a golden pile.

This is a much more slenderly built species than *S. flavus;* and may be readily separated from it by the cubital cellules being more equal in length, by the pronotum not bulging broadly outwardly in the middle, not narrowed at the apex, by the median segment having a more gradually rounded slope and the head is shorter and more obliquely narrowed behind the eyes. Characteristic, as compared with most of the species of the *flavus* group, is the fact that the coxæ and trochanters are not black.

Salius iobates, sp. nov.

Claws with one tooth. Black, the abdomen with a bluish tinge; the antennæ rufous yellow, the scape and the apical four joints black; the basal half of the wings fuscous-violaceous; the apical yellowish-hyaline; the hinder wings entirely smoky violaceous. ♀.

Long: 24 mm.

Hab. Kuching, Sarawak.

Head black; the part between and below the antennæ testaceous; the clypeus with a brownish tinge; its apex rufo-testaceous. Front and vertex alutaceous; the front distinctly furrowed down the centre. Eyes distinctly converging above; at the top separated from each other by the length of the fourth antennal joint; the hinder ocelli are separated from each other by a less distance than they are from the eyes. Thorax velvety black, sparsely covered with long black hair; the scutellum not projecting much over the mesonotum; the post-scutellum has a lower elevation than it; its apical two-thirds have an oblique, straight slope; its centre is keeled. Median segment obscurely transversely striated. The dark part of the wings extends close to the first transverse cubital nervure and on the lower edge near to the apex; the base of the cubital cellule is blackish also; the second cubital cellule is distinctly shorter than the third above and below; the third transverse cubital nervure is obliquely narrowed towards the second on the upper half; the accessory nervure in the hind wings is instertitial. Legs black; the calcaria and spines b'ack; the tooth on the base of the claws short and bluntly pointed. Abdomen black, with a distinct plumbeous-sericeous tinge; the anal segment thickly covered with long black hairs.

Macromeris au.·eopilosa, sp. nov.

Nigra, antennis subtus brunneis; capite thoraceque dense aureopilosis; alis flavo-hyalinis, apice fusco-violaceo, ♀.

Long: 13 mm.

Hab. Borneo.

Antennæ slender, black above, brown below. Head densely covered with depressed golden pubescence and more sparsely with long silvery hair Apex of clypeus broadly rounded. Mandibles black, broadly rufous near the middle; the base covered with silvery pubescence. Palpi testaceous. Thorax densely covered with depressed golden pubescence; the apex of the median segment transversely striated; the pleural tubercle nipple-like. Wings yellowish-hyaline; the apex from the second transverse cubital to the middle of the second recurrent nervure bright fuscous-violaceous. Legs long; the fore knees and tibiæ testaceous; the tarsi are minutely spined; the hind spurs are not much more than one fourth of the length of the metatarsus.

Allied to *M. castanea* (Bingh.)

Pompilus citherus, sp. nov.

Black, marked with yellow; a mark on the apex of the mesonotum, two spots on the scutellum and the tegulæ, yellow; wings yellowish-hyaline, the apices of both smoky; the second and third cubital cellules equal in length; legs black, marked with red and yellow; the four front tarsi annulated with yellow. ♂

Long: 11-12 mm.

Hab. Kuching, Sarawak.

Antennæ reddish-brown, black above; the fifth and following joints dilated on the underside. Head, if anything, wider than the thorax, black; the face, the inner orbits broadly to near the ocelli, the clypeus, except for a broad black line in the centre above, the base of the mandibles broadly, and the outer orbits to the outer edge, yellow; the hinder part of the vertex and the occiput and cheeks thickly covered with long soft pale hair. The apex of the clypeus is broadly rounded; the labrum is two-thirds of its length and is black; the eyes are parallel; the ocelli are in a curve, the hinder are separated from each other by a slightly greater distance than they are from the eyes. The temples are narrow; the occiput transverse. Thorax thickly covered with silvery pubescence, black; a broad line on the hinder edge of the pronotum, a mark, broader than long, on the apex of the mesonotum, two oval marks behind the middle of the scutellum, tegulæ and a small oblique mark over the middle coxæ, yellow. The apex of the pronotum is broadly rounded; the scutellum is roundly convex, but not much raised above the level of the mesonotum. Median segment alutaceous, and thickly covered with longish pubescence. Legs black; the coxæ and trochanters black, except at the apex of the anterior; the fore femora, except at the base, the middle and four posterior to near the middle, and the anterior tibiæ entirely, red; the four anterior tibiæ are yellow behind; the anterior tarsi yellow, black towards the apex; the middle black, with the four basal joints annulated with yellow; the hinder black; the spurs yellow. Wings yellowish-hyaline, the apices of both fuscous; the third cubital cellule is slightly shorter than the second; the first recurrent nervure is received near the base of the apical fourth; the second shortly beyond the middle; the transverse basal nervure is interstitial; the accessory nervure in the hind wing is received shortly beyond the cubital. Abdomen densely pruinose; there are two large marks, wider than long on the base of the second segment, two marks on the base of the fourth, two larger marks on the base of the sixth and the whole of the seventh, yellow. The tibial and tarsal spines are yellow.

Allied to *P. vagabundus* Sm., which, *inter alia*, may be known from it by the second cubital cellule being twice the width of the third.

Pompilus iliacus, sp. nov.

Black, pruinose; the wings fuscous-violaceous; the first recurrent nervure is almost interstitial; the third cubital cellule at the top shorter than, at the bottom longer than, the second. ♀

Long: 13-14 mm.

Head wider than the thorax, the temples very narrow, the occiput transverse. Eyes large, distinctly converging above; the ocelli in a triangle; the hinder separated from each other by about the same distance they are from the eyes. Clypeus transverse at the apex in the middle; the sides broadly rounded. Prothorax large; the basal part distinctly separated all round; at the sides it projects broadly. Median segment broadly rounded from the base to the apex. Wings fuscous-violaceous, the posterior lighter in tint; the second cubital cellule at the top is distinctly longer, at the top distinctly shorter, than the third; the transverse basal nervure is almost interstitial, as is also the first recurrent (as in the *Salius-Mygnimia* section); the second is received almost in the middle of the cellule; the accessory nervure in the hind wings is interstitial. Legs black; the tibial and tarsal spines black; the long spur of the hinder tibiæ does not reach to the middle of the metatarsus. Abdomen smooth; the last segment thickly covered with long black hair.

There is no transverse furrow on the second ventral segment; the meta-thoracic spiracles are large, raised and bordered behind by a furrow; the tibial and tarsal spines are long; the underside of the tarsi are thickly spined; the tarsal claws have a stout, sharp subapical tooth.

Comes near to *P. perplexus* Sm.

Pompilus cariniscutis sp. nov.

Niger, facie, clypeo, orbitis oculorum, linea pronoti, scutello post-scutelloque flavis; pedibus rufo-fulvis; coxis, trochanteribus, femoribus apiceque tibiarum late nigris; alis flavo-hyalinis, apice violaceis. ♂

Long: 13-14 mm.

Hab. Borneo (Shelford).

Antennæ black; the scape yellowish beneath. Head black, sharpened, sparsely pilose; the face, clypeus, the inner orbits broad below, narrowed above and the outer more narrowly and uniformly, bright orange-yellow. The hinder ocelli are separated from each other by a slightly less distance than they are from the eyes, which converge slightly below. Mandibles orange-yellow, black at the apex. On the thorax there is a broad, interrupted line on the pronotum not extending to the tegulæ; a mark, wider than long, and with the sides at the base slightly projecting, on the hinder part of the mesonotum, a large mark on the scutellum roundly narrowed towards the base, where there is in the middle, a rounded point; at its apex and touching it, is a transverse line, which does not extend to its outer edge; and the top of the scutellum, all orange-yellow. The scutellum is broadly rounded above; the post-scutellum is slightly higher than it; it is more distinctly raised and separated; its top is keeled; the sides have an oblique slope. The median segment is opaque, and thickly covered with pale pubescence; it is, except in the middle at the apex, closely irregularly reticulated. Legs rufo-fulvous, the coxæ, trochanters, the femora to near the apex and the apical third of the hinder tibiæ, black. Wings, yellowish-hyaline; the apex of both wings violaceous, the first cubital cellule at the top is fully one-fourth longer than the second; the third transverse cubital nervure in the hind wings is interstitial.

The median segment has a gradually rounded slope; the inner spur on the hinder tibiæ is not half the length of the metatarsus; the basal segment of the abdomen is narrow at the base, becoming gradually wider towards the apex; the pronotum is rather short. The transverse median nervure is received in front of the transverse basal.

Belongs to the group of *P. multipictus* Sm., and the European *P. 4 punctatus*, Fab. Characteristic is the prominent, raised, keeled post-scutellum.

P. 4 punctatus, I may add, is found in Japan also.

Pompilus parmenas, sp. nov.

Niger, vertice, fronte, linea pronoti, scutello, post-scutello, macula mesonoto, linea abdominis segmento 2′, maculaque segment 7′, flavis ; alis flavo-hyalinis, apice fusco-fumato. ♂

Long : 12 mm.

Hab. Borneo (Shelford).

Antennæ black, the scape for the greater part yellow. Head black, the face, front and the vertex, except behind, lemon-yellow ; the ocellar region black ; smooth, shining, almost bare. The eyes distinctly converge above, where they are separated by slightly less than the length of the third antennal joint. The apex of the clypeus is broadly rounded. Thorax black ; a broad band on the centre of the pronotum behind, a large mark on the apical half of the mesonotum, its sides straight, its base irregular ; and it is broader than long ; the greater part of the scutellum (the mark obliquely narrowed laterally at the base), the post-scutellum and a line on the base of the second abdominal segment, lemon-yellow. The median segment is thickly covered with greyish hair ; wings yellowish-hyaline ; the apex is smoky, broader at the top, where the cloud extends to the second transverse cubital nervure ; the second cubital cellule at the top is distinctly shorter than the first ; the two transverse cubital nervures converging there ; the transverse basal nervure is interstitial. Legs black ; the tibiæ and tarsi rufo-fulvous. The base of the second abdominal segment is lined with orange-yellow ; the last segment above is broadly pale yellow.

Has the general colouration of *P. cariniscutis* here described ; but is readily known from it by the flat post-scutellum and by the interstitial transverse basal nervure.

Pseudagenia reticulata, sp. nov.

Nigra, abdominis basi late femoribusque posticis rufis : alis fusco-violaceis, basi hyalinis ♀.

Long: 11-12 mm.

Front, face and clypeus covered with a silvery pile. Eyes distinctly converging above; at the top they are separated by twice the length of the second joint of the antennæ; the hinder ocelli are separated from the eyes by the same distance they are from each other. Clypeus rather short, broader than long. Palpi black. Thorax thickly covered with silvery pubescence; the central part of the mesonotum punctured and clearly separated from the lateral by a narrow furrow; the lateral parts are smooth, and the central part is more strongly punctured on the sides. Scutellum sparsely punctured; the post-scutellum shagreened. Median segment thickly covered with white pubescence; irregularly, closely reticulated. Meso- and metapleuræ closely, irregularly reticulated. Legs black; the hinder femora clear red; the tibiæ obscurely rufo-testaceous, the calcaria black. Wings fusco-violaceous, narrowly hyaline at the base; the third cubital cellule at the top shorter than the second, below about equal in length to it; the first recurrent nervure is received shortly behind the middle; the second at the apex of the basal third. Abdomen smooth and shining; the basal three segments ferruginous, the apical black and thickly pruinose.

Pseudagenia borneana, sp. nov.

Nigra, dense argenteo-pilosa; femoribus posticis rufis; alis fere hyalinis, nervis stigmatique nigris; flagello antennarum late rufo ♀.

Long: fere 12 mm.

Hab. Sarawak, Borneo (R. Shelford).

Antennæ black, the fourth and following joints rufous beneath. Head alutaceous; the lower part of the front, the face, clypeus and base of mandibles densely covered with silvery pubescence. The hinder ocelli are separated from the eyes by a slightly greater distance than they are from each other. The apex of the clypeus in the middle is smooth and shining; mandibles piceous near the middle; the apical joints of the palpi pale testaceous. Thorax densely pruinose; the pile has a fulvous tinge; the pronotum is broadly rounded; the propleuræ behind have two rounded, clearly separated, tubercles, the basal being the larger. The median segment has a short, rounded slope; it is irregularly transversely wrinkled. The wings are hyaline, with a slight, but distinct, fulvous tinge; the first and second cubital cellules are equal in length above; the first recurrent nervure is received in the middle; the second at the apex of the basal third of the cellule; the accessory nervure in the hind wings is interstitial. Legs black; the hinder femora entirely and the four anterior tibiæ and base of tarsi rufous in front. Abdomen pruinose; the basal segment is triangular, and becomes gradually wider from the base to the apex, and without a neck at the base.

This species comes near to *P. tincta*. Sm., *sec.* Cam., Manch. Mem. 1891, p. 441. That species may be known from it by its head and thorax being densely pilose, by the first cubital cellule being distinctly shorter than the second above; by the apex of the propleuræ not being so distinctly bituberculate, and by the first transverse cubital nervure being roundly curved, not straight, as in the present species.

Agenia balteata, sp. nov.

Nigra, scapo antennarum, clypeo, mandibulis, pedibusque pallide testaceis; femoribus, tibiis tarsisque posterioribus nigromaculatis; alis hyalinis; stigmate nigro, nervis fuscis ♀.

Long: 11 mm.

Hab. Kuching, Sarawak, and Singapore.

The basal two joints of the antennæ rufo-testaceous; the third joint dark testaceous; the fourth, fifth and sixth joints dark testaceous beneath. Head black; the clypeus, mandibles, and lower inner orbits yellowish testaceous; the palpi at the base testaceous, the apical joints pale yellow; the hair bundle long and dark testaceous. The front is thickly covered with a golden pile and has a narrow furrow down the middle. The eyes distinctly converge above and are separated there by the length of the third antennal joint. Thorax thickly covered with golden pubescence; the prothorax yellowish-testaceous. Legs yellowish-testaceous; the four hinder trochanters, the middle femora with an irregular line above, the apex of the hinder femora, the apex of the middle tibiæ, the apical two-thirds of the hinder tibiæ, the apex of the fore tarsi and four posterior, except at the base, black. Wings clear hyaline; the stigma black, the nervures paler. Abdomen black; the apices of all the segments testaceous; the last segment almost entirely testaceous.

This is an *Agenia* as now limited. The species recorded by Smith from the Malay and Indian regions are probably mostly referable to *Pseudagenia*, Kohl. The distinction between the two consists in *Agenia* having a bundle of stiff bristles at the base of the maxilla in the ♀.

SPHEGIDÆ.

Ampulex striatifrons, sp. nov.

Dark green, largely tinged with blue; the flagellum of the antennæ black; the wings hyaline; the radial cellule and the space bounded by the first and third transverse cubital nervures and the discoidal cellule smoky; the front with three stout, longitudinal keels; the space bounded by them is transversely striated ♂.

Long: 12 mm.

Hab. Kuching, Sarawak.

Antennæ black, covered with a pale pile; the scape with hardly any metallic tint. Head blue, the ocellar region largely tinged with purple; the three keels in the front are stout and all reach to the base of the mandibles; the part between them, from near their top, bears stout, oblique striæ; the part on their outer side at the top bears some large punctures; the vertex is sparsely and strongly punctured. The front ocellus is separated from the hinder by a greater distance than these are from each other, and the latter are separated from the eyes by a distinctly greater distance than they are from each other. Clypeus distinctly keeled in the middle, green, smooth and thickly covered with white pubescence. Mandibles brownish-black; their middle, on the lower side, with a row of large punctures. Prothorax elongate, the base distinctly narrowed; it is sparsely punctured and the middle of the pleuræ bears a longitudinal furrow. The central part of the mesonotum is strongly and deeply punctured; the sides are more sparsely punctured, are coppery in colour and are depressed behind. Scutellum and post-scutellum sparsely punctured. Median segment irregularly transversely striated;

the striæ are more widely separated in the centre; the second keel does not reach to the apex. The apical slope is thickly covered with white hair; the striation is close and obliquely transverse; the upper lateral teeth are small. The mesopleuræ are distinctly, but not closely, punctured; the upper part of the metapleuræ is stoutly striated. Legs for the greater part blue; the femora more greenish in tint than the tibiæ; the inner tooth of the claw is shorter and stouter than the outer. Wings hyaline, the radial cellule, the space bounded by the first and third transverse cubital nervures and the upper part of the discoidal are smoky; the three transverse cubital nervures are distinct. Abdomen largely marked with blue and purple tints; the third segment is largely marked with rosy and brassy tints; it is strongly punctured; its apical half is distinctly depressed, is more fiery in tint than the base and is more closely and not so strongly, punctured.

Comes near to *A. sodalicia*, Kohl. from Malacca.

Tachytes borneana, sp. nov.

Black; the head and thorax densely covered with pale silvery pubescence; the abdominal segments banded with silvery pile; the pygidium covered with golden pubescence; wings hyaline, with a faint yellowish tinge; the nervures pale testaceous; the second and third cubital cellules at the top equal in length ♀.

Long: 13 mm.

Hab. Kuching, Sarawak.

Antennæ black, covered with a pale microscopic pile. Front, face and clypeus densely covered with silvery pubescence and more sparsely with long pale hair; the vertex sparsely with long pale hair; alutaceous; the lower part of the vertex has a narrow furrow in the middle, which ends, above the ocelli, in a smooth depression. Mandibles black; the palpi testaceous. The basal portion of the median segment has a thin furrow down the middle, which becomes conically dilated at the apex; the furrow on the apical slope is wide and deep. The second and third cubital cellules are equal in length above; they are as wide there as the space bounded by the two recurrent nervures. Legs black; the front tarsi testaceous at the apex; the calcaria testaceous; the tibial and tarsal spines white. The abdominal segments are banded with depressed silvery pubescence; the pygidium is covered with bright golden pubescence.

The radial cellule has the apex rounded, not acute; the eyes above are separated by not quite the length of the second and third antennal joints united; and there is no appendicular cellule in the fore wings. Comes near to *T. nitidula* F. and *T. rothneyi* Cam., from both of which it may be known by the golden pile on the pygidium.

Notogonia umbripennis, sp. nov.

Black, covered with silvery pubescence; the pygidium with a stiff golden pile; the wings fuscous-violaceous ♀.

Length 14-15 mm.

Hab. Kuching, Sarawak.

The lower part of the front and the clypeus thickly covered with silvery pubescence; the front and vertex closely and minutely punctured; the centre of the face has an impressed line; the clypeus is smooth, shining and bare. Eyes large, distinctly converging above, where they are separated by about the length of the fourth antennal joint. The base of the mandibles is thickly covered with silvery pubescence; the palpi are black and covered with a grey pile. The mesonotum is depressed in the middle at the base; and there is a short longitudinal furrow opposite the tegulæ. Median segment alutaceous; there is a narrow keel down the centre of the basal two-thirds; above the middle of the mesopleuræ is a distinct striated longitudinal furrow, which does not reach to the apex. Wings fuscous-violaceous; the second and third cubital cellules above are equal in length; the recurrent nervures are received close to each other near the apex of the basal third of the cellule. Legs stout; the apex of the hinder tibiæ and the metatarsus covered with a golden pile; the spines on the tibiæ and tarsi are black, as are also the calcaria. Abdomen pruinose; the segments banded with silvery pile; the pygidium densely covered with bright golden pile and thickly with long stiff fulvous hair. The sides of the median segment are obscurely obliquely striated.

Comes nearest perhaps to *N. jaculatrix* Sm. from which it may be known by the dark violaceous wings.

Notogonia tegularis, sp. nov.

Black, densely covered with silvery pubescence; the wings hyaline, highly iridescent; the apex slightly smoky; the mesonotum and scutellum closely minutely punctured; the median segment obscurely transversely striated; the base with a longitudinal keel ♂.

Long: 9 mm.

Hab. Kuching, Sarawak.

Front, face and clypeus densely covered with silvery pubescence, this being also the case with the outer orbits and the base of the mandibles; the eyes distinctly converge above, where they are separated by almost the length of the second and third joints united. Thorax covered with a silvery pile; the mesonotum and scutellum are closely, minutely punctured, the latter more strongly than the former. The post-scutellum is depressed in the middle. Median segment alutaceous; the basal half transversely striated, but not strongly or closely and keeled down the middle. The mesopleuræ closely and distinctly punctured; on the basal half, in the centre, is a distinct longitudinal furrow; the basal half of the mesopleuræ longitudinally striated in the middle, the striæ longest in the middle. Legs black, pruinose; the spines on the tibiæ are pale, on the tarsi rufous. Wings hyaline, highly iridescent, somewhat infuscated at the apex; the second and third cubital cellules at the top are about equal in length and are of the length of the space rounded by the two recurrent nervures, the outer of which is received in the middle of the cellule; the appendicular is longer than usual. Abdomen shining; the segments banded with silvery pubescence; the last segment entirely covered with silvery pubescence. The first transverse cubital nervure is broadly and roundly curved and is not angled. The tegulæ are black at the base, pale testaceous in front.

Cerceris crassidens, sp. nov.

Black, the basal four or five abdominal segments rufous; the antennal keel, a mark on the apex of the clypeus and the base of the mandibles, pale yellow; the wings smoky violaceous, paler at the base; the lower part of the mesopleuræ projecting into a stout tooth ♀.

Long: 18-19 mm.

Hab. Pankalan Ampat, Sarawak.

Antennæ stout, black, the apex rufous. Head black; the outer part of the antennal keel pale yellow; it is longish, stout and has a narrower keel on its apex; the face, cheeks and clypeus are thickly covered with silvery pubescence; except behind the ocelli it is closely and somewhat strongly punctured. Mandibles black; the basal half broadly yellow; behind the middle above they project upwards into a large, smooth shining, bluntly pointed tooth. Thorax densely covered with silvery pubescence; above closely and distinctly punctured, the punctures in the middle of the mesonotum running into longitudinal striations. The scutellum is slightly depressed in the middle; the area on the median segment is longitudinally striated. Legs black, covered with a silvery pile; the four hinder tibiæ are broadly lined with pale yellow behind. The wings are dark smoky, the base and the discoidal cellule paler; the hinder wings are almost hyaline except at the apex. Abdomen red, the apical two segments for the greater part black above; it is smooth, with the petiole and the penultimate segment sparsely punctured. The pygidium is closely punctured, reticulated; the sides of it are fringed with stout stiff hairs; the oblique sides of the segment are sparsely punctured; the apical half of the epipygium is incised in the middle; the incision is distinctly bordered, is rounded and obliquely narrowed behind; the segment at the base is depressed on either side.

In colouration this species is not unlike *C. viligans* Sm. and *C. sepulcralis* Sm., but may be easily separated from them by the stout projecting tooth on the mesopleuræ. The head is large and is well developed behind the eyes; the apex of the clypeus is depressed and is bluntly and shortly tuberculated in the middle and at the sides, the basal half of the petiole is keeled in the middle; the second cubital cellule on the lower side is distinctly shorter than the third.

Cerceris latidens, sp. nov.

Black; the inner lower orbits, the base of the mandibles, the sides of the scutellum, the post-scutellum, the apex of the petiole and an interrupted line on the apex of the third segment, yellow; the apex of the clypeus bidentate; the area on the median segment obliquely striated; the wings hyaline, with a smoky fascia on the apex ♀.

Long: 7 mm.

Hab. Kuching, Borneo.

Antennæ black, the scape yellow, the flagellum brownish beneath. Front and vertex closely punctured, except over each antennæ; the antennal keel is stout, yellow, black above; the face is sparsely punctured, as is also the clypeus, except at the apex, which is bidentate; the teeth are broad and slightly oblique at the apex. Mandibles broadly yellow at the base. Mesonotum punctured, but not closely or deeply, as is also the median segment; the scutellum is more closely punctured. The area on the median segment is obliquely striated, except in the centre. Mesopleuræ reticulated, more strongly and distinctly below than above; the centre is deeply furrowed. Legs black; the anterior and middle tibiæ in front, the anterior tarsi, and the base of the middle tarsi, pale yellow. Wings clear hyaline, the radial cellule at the apex and the upper part of cubital below it dark smoky; the petiolated cellule is distinctly shorter than the following and receives the recurrent nervure at the apex of the basal third. The apex of the petiole, the base of the second segment and an interrupted line on the third segment are yellow; the pygidium is brownish, smooth at the base, punctured at the apex; the sides are strongly punctured; the epipygium is broadly depressed.

There is a stout, curved keel on the lower part of the metapleuræ in the middle; the lower part of the clypeus, under the projecting toothed part, is bluntly bidentate; the apex of the mandibles is bluntly rounded.

VESPIDÆ.

Icaria latebalteata, sp. nov.

Dark ferruginous, variegated with black and yellow; the petiole short, wide, narrowed distinctly at the base; rufous, its apex broadly yellow; the apex of the second segment broadly yellow, much broader in the middle than at the sides; wings hyaline, the radial cellule dark smoky, except along the lower edge; the stigma dark, the nervures of a lighter fuscous colour (worker).

Long: 9-10 mm.

Hab. Kuching, Sarawak.

Scape of antennæ yellow, dark testaceous above, the flagellum blackish, brownish at the base and apex beneath. Head dark ferruginous, thickly covered with silvery pubescence, the vertex sparsely with fuscous hair; the lower inner orbits to near the inner part of the incision; the sides of the clypeus broadly, its apex more narrowly, a line on the outer orbits near the top, another one below and the base of the mandibles broadly above, pale yellow. The front and the vertex to the end of the ocelli are distinctly, regularly, but not very closely, punctured; the clypeus is sparsely punctured, more especially noticeable on the dark central part. The meso- and metapleuræ are black, the metanotum dark rufous; the rest of the thorax rufous, with the following parts yellow: the base of the prothorax all round and broadest on the top of the pleuræ, a large mark on either side of the base of the scutellum, a broad band, incised in the middle, on the base of the post-scutellum, two large marks on the apical slope of the median segment, and a longish mark on the mesopleuræ below the tegulæ. The pro- and mesothorax with the scutellum are closely and distinctly punctured; the median segment is almost impunctate; its central furrow is wide, with oblique sides; its upper two-thirds irregularly transversely striated. Legs dark rufous; the anterior coxæ broadly, the apex of the femora (the anterior broadly) and the base of the tibiæ broadly, yellow. Wings clear hyaline, the apex of the costal and the radial cellules, except on its lower edge, smoky; the costa and stigma blackish; the nervures pale. The petiole is not quite so long as the second segment; its basal third is narrowed; the second segment is not narrowed at the base, is bell-shaped, its length greater than its width at the apex and it is closely and distinctly punctured, more closely and rugosely at the base than at the apex; the following segments are lined with yellow at the apex.

Comes near to *I. ferruginea*, but is smaller, and darker coloured; the clypeus is broadly black in the middle, the radial cellule entirely black above, not broadly hyaline at the base; the stigma black, not clear testaceous, and the band on the second segment is broadly dilated backwards in the middle.

Icaria flavo-bilineata, sp. nov.

Black, the post-scutellum and the apex of the petiole yellow; the apex of the clypeus broadly pale yellow; wings hyaline, a fuscous spot in the radial and apical cellules; the stigma yellowish.

Long': 13 mm. (worker).

Hab. Kuching, Sarawak.

This species comes near to *I. lugubris* Sm. *Sec.* Saussure, S. E. Z. XXIII, p. 134, which is also from Borneo. The two may be separated as follows:

The cloud occupying all the radial cellule, the second transverse cubital nervure almost interstitial, the post-scutellum and apex of petiole not yellow, the stigma black. *lugubris* Sm.

The cloud in the radial cellule commencing at the end of the stigma, the stigma yellow; the second recurrent nervure not interstitial; the post-scutellum and apex of petiole lined with yellow. *flavobilineata*.

Flagellum of antennæ brownish beneath. Front and vertex alutaceous, sparsely punctured, there is a narrow keel between the antennæ; clypeus covered with a sparse pale down, sparsely haired, and roundly convex; its middle at the apex not distinctly toothed; it has the narrowed apical part pale yellow. Mandibles black, the teeth dark piceous. Thorax opaque; the mesopleuræ and scutellum closely and distinctly, but not strongly, punctured; the mesonotum is thickly covered with a fuscous down; the base of the prothorax is sharply keeled. The scutellum has a shallow furrow down the middle. The striation on the median segment is obscure. Legs black, pruinose; the calcaria and claws white. Wings hyaline; the costal cellule is slightly smoky; the cloud in the radial cellule is at the end of the stigma and at the second transverse cubital nervure and extends to the apex; in the cubital cellule it does not extend beyond the end of the radius; the recurrent nervures are received shortly behind and beyond the middle of the cellule. Abdomen black, densely pruinose, more thickly towards the apex; the apex of the petiole is yellow.

The middle of the median segment has only a shallow indistinct furrow, not a deep one, with oblique sides as in *lugubris;* the apex of the median segment is yellow, the yellow band extending sideways over the coxæ; the petiole is short, becomes gradually wider from the base to the apex; the second segment is not much, nor abruptly narrowed at the base; in length it is, if anything, shorter than its greatest width; the clypeus at the end of the eyes is as broad as its length.

Icaria xanthopoda, sp. nov.

Black, largely marked with yellow; two small marks on the apex of the petiole and two large ones, extending on to the ventral surface, on the base of the second segment; the legs yellow, the posterior trochanters and the base of the femora, black; wings hyaline, the stigma and nervures brownish (worker).

Long 11 mm.

Hab. Borneo (Shelford).

Antennæ brownish, marked above with black. Head black, the clypeus, the mandibles, except their teeth, the eye incisions entirely (the yellow mark is straight and oblique on the outerside), a large mark, narrowed below, and ending in a sharp narrowed point above, and the outer orbits, bright sulphur-yellow; behind the ocelli are two small yellow marks. The clypeus is wider than long; its sides above are roundly curved; its apex does not end in a sharp tooth. Thorax black; the edge of the prothorax all round and broadest on the pronotum, two lines on the centre of the mesonotum, two large squarish marks on the base of the scutellum, two broad ones, narrowed and rounded on the inner side, on the post scutellum, the sides of the median segment largely, and a large mark, obliquely narrowed below on the mesopleuræ, orange-yellow. Abdomen black; a mark on the sides of the post-petiole, two large marks on the base of the second segment, continued on to the ventral surface, which has the basal half yellow; a narrow line on the apex on the second segment all round and the apical segment, orange yellow.

The petiole is not quite so long as the second segment; its basal fourth is greatly and distinctly narrowed compared to the enlarged apical part; the second segment is bell-shaped; its apex about two-thirds of the total length; the base of the prothorax is sharply keeled; the third cubital cellule is of the same width above as below; the third transverse cubital nervure is parallel with the second, and both are roundly curved inwardly.

Ischnogaster flaviplagiatus, sp. nov.

Ferruginous brown, the clypeus, eye orbits, two marks, obliquely narrowed, on the base of the scutellum, the pleuræ and the apical half of the median segment, pallid yellow; the wings clear hyaline, the stigma testaceous, the third cubital cellule not half the length of the second, the fourth at the top as long as the third. ♀

Long: 13-14 mm.

Hab. Kuching, Sarawak.

Antennæ ferruginous, the flagellum darker in the middle above. Head smooth; the front and vertex covered with silvery pubescence; the clypeus with longer fuscous hair. The lower part of the clypeus is ferruginous, the upper yellow. Mandibles yellow, their apex black. The inner orbits and the eye incisions yellow. Thorax smooth and shining, thickly covered with glistening white hair. The base of the median segment is darker coloured than the mesonotum; it is smooth and is distinctly keeled down the centre. Wings clear hyaline, highly iridescent; the stigma clear testaceous; the nervures darker; the second cubital cellule is more than twice the length of the third, which, at the top, is as long as the fourth; the second and third transverse cubital nervures are straight and converge above; the first recurrent nervure is received quite close to the first transverse cubital; the second at fully twice the distance from the second; the second recurrent nervure is slightly and roundly bent outwardly in the middle. Legs paler in tint than the body, and thickly covered with pale hair. Abdomen coloured like the thorax, the segments mottled with pallid yellow; there is a distinct pale yellow mark on the base of the second segment at the sides and a large one on the side of its ventral surface; the extreme base of the narrowed neck is also yellow. On the mesopleuræ under the tegulæ is a mark which reaches to the middle; below the middle is a large curved yellow mark.

Comes near to *I. nitidipennis* Sauss. *Sec.* Bingham.

Ischnogaster nigricans, sp. nov.

Black; a line on the pronotum, a broad one on the post-scutellum, one below the tegulæ and two small ones on the apex of the median segment, yellow; the four front tibiæ yellow behind; the wings clear hyaline, iridescent, the stigma and nervures black. ♀.

Long. 12 mm.

Hab. Kuching, Sarawak.

Head entirely black; the face and clypeus thickly covered with silvery pubescence; opaque, closely, but not very strongly, punctured, the clypeus less strongly punctured; the apical tooth bluntly pointed. Thorax black, covered with silvery pubescence; the scutellum with long pale hair. Mesonotum, scutellum and median segment closely and distinctly punctured; the median segment with a distinct, narrow, deep furrow down the centre, which is widened and smooth at the apex. A line on the pronotum, a mark under the tegulæ, the post-scutellum broadly and two marks on the apex of the median segment, yellow. The second and third transverse cubital nervures are straight, slightly oblique and converge slightly above; the fourth cellule at the top is two-thirds of the length of the third. All the knees are yellow, the four front ones broadly; there is a black line on the yellow, near the base of the middle tibiæ. Abdomen entirely black; the petiole twice the length of the thorax; the base of the second segment is widely narrowed.

Ischnogaster ornatifrons, sp. nov.

Black, largely marked with yellow, the antennæ brownish, black above, except at the sides of the median segment with a large yellow mark dilated at the apex; the wings hyaline, the radial and two apical cubital cellules infuscated. ♀.

Long: 22 mm.

Hab. Santubong, Kuching, Sarawak.

Head black, the front, except for a small black mark in the middle above, the clypeus, the mandibles, a small oblique mark on the outer side of the antennæ, one in the eye incisions and a small one on the hinder edge of the vertex, yellow. The front is distinctly, but not closely, punctured and is furrowed in the middle, deeply and distinctly above. Thorax shining and smooth; the mesonotum more opaque and closely punctured; the scutellum is more sparsely punctured, and has a narrow keel on the basal half. The following are yellow:— a broad line on the pronotum, two large marks, rounded behind, on the base of the scutellum, a broad band, almost interrupted in the middle, on the post-scutellum, a large broad band, widened below, on the sides of the median segment, half on the metanotum, half on the pleuræ, a large oval mark below the tegulæ and a large curved mark on the lower side of the mesopleuræ. Wings hyaline, the radial and the apical two cubital cellules smoky; the second transverse cubital nervure is slightly, roundly bent outwardly, the fourth cubital cullule is half the length of the third. The front legs are yellow, lined with black in front; the apical joints of the tarsi are brownish; the middle legs are brownish-black; the base of the tibiæ, their apex more broadly and the base of the tarsi more narrowly, yellow; the four hinder coxæ are broadly yellow behind. Abdomen black; a large oval mark near the middle of the second segment below; a short line on the sides of the ventral surface, a band near the base of the third segment broadest on the sides, a mark on its ventral surface, rounded on the outer side, a smaller one on the fourth and a narrow line on the fifth dorsal segment, yellow.

Ischnogaster fulvipennis, sp. nov.

Black, with small yellow marks; the clypeus with two marks above and one in the centre below and two small marks on the apex of the median segment; the legs and petiole dark rufous; wings fulvous; the stigma testaceous; the second transverse cubital nervure is roundly curved; the fourth cubital cellule is fully half the length of the third. ♀

Long: 23 mm.

Hab. Mt. Penrissen, Sarawak.

Antennæ black, the scape and apical joints brownish beneath, the apical joints entirely so. Head black; an irregular mark roundly narrowed below and ending in a joint, on either side of the front, a longish mark on the upper half of the face, narrowed and curved above, and there is a longish broad mark on the centre near the apex, extending to the base of the tooth and yellow. The lower part of the vertex is sparsely and distinctly punctured; the front is more closely and not so strongly punctured, except in the middle where it is smooth; almost bare and impunctate. Mandibles black, sparsely punctured and shining. Thorax smooth and shining, except on the mesonotum which is closely and distinctly punctured; the scutellum is less strongly punctured and has a narrow keel in the middle; both are thickly covered with fulvous hair. Median segment and pleuræ smooth and shining; the pleuræ have a plumbeous hue. On the thorax the following are yellow; a line on either side of the base of the pronotum, an irregular spot on either side of the base of the scutellum, two smaller spots on the base of the post-scutellum in the centre, two small marks on the apex of the median segment, a spot about three times longer than broad on the mesopleuræ in the middle below the tegulæ, and a curved mark below the furrow, this spot having the apex narrower and more oblique than the base. Legs dark rufous, probably varying in tint; the coxæ, tibiæ and tarsi are darker coloured than the femora; the hair is long and fuscous. Wings fulvous-hyaline, darker at the apex; the stigma is testaceous, the nervures fuscous; the second transverse cubital nervure is roundly curved outwardly; the fourth cellule is fully half the length of the third. The petiole is brownish, the node black above except at the base; there is an oval, small yellow mark on either side of the second segment below, and two elongate marks on the base of the third, with a small spot on either side. There are two obscure yellow marks on the base of the median segment.

The ♂ is more richly coloured than the ♀ the yellow markings being larger and the rufous colour of the legs and petiole much brighter in tint. The front is yellow, except for a black line in the centre, the clypeus entirely yellow; the mandibles are dark testaceous; the marks on the thorax are larger, especially the upper mark on the mesopleuræ and on the base and apex of the median segment. The petiole is almost twice the length of the rest of the abdomen; the rufous colour extends to the narrowed part of the second segment, the lower half of the clypeus is keeled in the middle, the tubercle on the propleuræ is large; there is a narrow striated band on its apex, and a broader, oblique one below its middle.

One of the largest of the Oriental species.

Ischnogaster flavolineata, sp. nov.

Black, largely marked with yellow; two small marks on the lower part of the front, one on either side of the ocelli behind, two lines on the mesonotum, the basal half of the scutellum, the post-scutellum and the median segment, except a squarish black mark on the base, yellow; legs pale yellow, the apical half of the tibiæ and of the tarsi black; wings clear hyaline; the fourth cubital cellule not much more than half the length of the third. ♀.

Long: 17 mm.

Hab. Lingga, Sarawak.

Antennæ black, the apical joints of the flagellum brownish beneath. Head black; a curved mark on the vertex behind the ocelli and touching the eyes and obliquely narrowed towards the apex, the eye incisions, an ovate transverse mark over each antennæ, the lower orbits broadly, the sides and apex of the clypeus, the outer orbits and the mandibles, pallid yellow. The vertex is obscurely, the face somewhat more strongly, punctured. Clypeus is smooth; its sides are covered with long silvery pubescence; the apical tooth is clearly separated, twice longer than broad, and its apex is slightly incised; the black mark has its sides at the apex prolonged, the part between them at the base being also separated. The upper edge of the pronotum is yellow, as is also the lower half of the propleuræ. Mesonotum black, except for two lines on the basal half, these being dilated on the outer side at the base. The yellow mark on the scutellum is dilated laterally. Post-scutellum yellow, its apex black. Pleuræ yellow, slightly streaked with fuscous; the median segment yellow, except for an irregularly squarish black mark at the base. Legs yellow; the hinder trochanters, the under side and base of the hinder femora, the basal two-thirds of the hinder tibiæ and the four apical joints of the hinder tarsi, black. Wings clear hyaline, the stigma testaceous, the nervures fuscous; the fourth cubital cellule is half the length of the third; the third transverse cubital nervure is straight and slightly oblique; the second is slightly, but distinctly, roundly curved on the lower half. Abdomen black, thickly covered with longish pale hair; there is a clear yellow band at the base of the dilated part of the petiole, a narrower one at the base of the second segment, a large oblique mark on either side of its middle, a narrow longitudinal line in its centre, and the apices of the other segments narrowly, yellow. The black on the abdomen has a brownish tinge.

EUMENIDÆ.

Montezumia? forticeps, sp. nov.

Black; the clypeus, the underside of the scape, two oblique lines on vertex, a large mark, narrowed below on the outer orbits; the pronotum broadly, two lines on the mesonotum, two marks on the scutellum, two lines on the post-scutellum, the sides of the median segment broadly, a line on the side and apex of petiole, two lateral marks on the second abdominal segment and the apices of the second, third and fourth segments, yellow; the wings fuscous-hyaline, with a fulvous tinge. ♀.

Long: 21 mm.

Hab. Mt. Matang, Sarawak.

Antennæ black; the scape largely yellow below. Head largely developed behind the eyes; closely punctured, the front more closely and strongly than the vertex; the eye incision less closely punctured than the vertex; above the antennæ is a small, somewhat conical mark, which is smooth and furrowed in the middle, except above. Clypeus distinctly broader than long; sparsely but distinctly, punctured; its apex is narrowly black; the sides of the incision are oblique and project at the apex. The marks on the pronotum become roundly dilated on the outer side and do not quite reach to the middle; the two lines on the mesonotum are in the middle following the parapsidal furrows and are about equal distance from the base and apex. The two marks on the scutellum do not quite reach to the middle and are broader than long. The two marks on the median segment extend on the inner side to the edge of the furrow and are roundly narrowed on the inner side above. There is a yellow mark on the mesopleuræ, longer than broad, below the base of the front wings. Pro- mesonotum and scutellum closely punctured; the mesonotum less closely and strongly at the sides. The parapsidal furrows commence shortly beyond the middle. The median segment is closely and strongly punctured at the base; the apical furrow is wide, becomes gradually wider towards the apex and is keeled down the middle; its apical slope is oblique. The second cubital cellule is narrowed at the top, the nervures almost touching there; both are straight and oblique; the first recurrent nervure is received distinctly behind the middle; the second close to the second transverse cubital, almost interstitial. Legs black; the fore femora are yellow at the apex; the four hinder are rufous below and probably in some examples above. Abdomen black; the apices of the basal four segments yellow; there is an oval oblique mark on either side of the second segment at the base. The petiole is nearly as long as the second segment; it is stout, with the basal third distinctly narrowed; it is distinctly, but not very closely, punctured; the second segment is alutaceous.

The generic location of this species is doubtful. It has 3- and 6-jointed palpi as in *Zethus*, and it has further the head largely developed behind the eyes as in that genus and thereby differs from *Eumenes*. The petiole is shorter and stouter than it is in the typical *Zethus* and also the second segment is not contracted at the base into a neck. The form of the cubital cellules is different from what they are in *Eumenes* and more like what they are in *Zethus*. It is not a typical *Montezumia* either, although it has certainly some affinity to that genus, which has five jointed maxillary palpi. I leave it, in the meantime, in *Montezumia*, which is, strictly speaking, an American genus.

Zethus varipunctatus, sp. nov.

Black; the upper side of the mandibles and a large mark on the apex of the clypeus, yellow; the scape of the antennæ, the tegulæ and the legs rufous; the hinder tibiæ and tarsi blackish; wings fuscous-violaceous towards the apex; the apex of the clypeus broadly rounded, not dentate ♀.

Long: 17 mm.

Hab. Kuching, Sarawak.

Head thickly covered with short pale pubescence, rugosely punctured, the punctures running into reticulations on the front. Clypeus roundly convex; its greatest width greater than its greatest length; closely and distinctly punctured, but not so coarsely as the front; its apex broadly rounded. The scape of the antennæ is broadly rufous below; the apical joints are brownish beneath. Thorax entirely black covered with a pale pile; the mesonotum and scutellum more thickly with longer pale pubescence. Mesonotum closely rugosely punctured; the punctuation sparser towards the apex; the two furrows are indistinct at the base, being confounded with the punctuation. Scutellum strongly punctured and with a narrow furrow in the middle; the post-scutellum is, if anything, more rugosely punctured; its apex is opaque, alutaceous. The median segment is opaque, alutaceous, keeled down the centre and at the sides; above it is obscurely striated. Propleuræ smooth, the upper part at the base striated. Mesopleuræ closely, rugosely punctured; the basal and apical slopes smooth. Metapleuræ strongly punctured, except for a large oblique space on the base and apex. Petiole closely and uniformly punctured; the base rufous, smooth. Legs bright rufous; the hinder tibiæ and tarsi infuscated.

This does not appear to me to be the ♀ of *4.-dentatus*, as apart from the difference in colouration, there are structural differences between them not of a sexual nature. The two may be separated thus:—

The furrow at the base of the scutellum with five stout keels; the metapleuræ coarsely punctured and striated throughout. *4.-dentatus.*
The furrow at the base of the scutellum with eight short keels; the metapleuræ sparsely punctured above, smooth below. *varipunctatus.*

Odynerus cilicius, sp. nov.

Black, largely marked with yellow; the median segment yellow, except in the middle, a dagger-shaped line on the front, a mark on either side of the ocellar region and two oblique large marks on the mesopleuræ, yellow; wings hyaline; the radial cellule and the cubital nervures in front dark smoky ♀.

Long: 12-13 mm.

Hab. Kuching, Sarawak.

Front distinctly, but not very closely, punctured, the vertex almost impunctate. The mark on the front is narrowed in the middle and obliquely narrowed above; the eye incision, the inner orbits narrowly, and the outer orbits more broadly, yellow. Clypeus yellow, smooth, obscurely punctured at the apex; its greatest length is slightly greater than its greatest breadth; the apical incision is wide and shallow. The scape is yellow, the flagellum brownish beneath. The basal two-thirds of the pronotum broadly yellow; there are two short, narrow lines in the centre of the mesonotum; almost the basal half of the scutellum is yellow; the apex is more strongly punctured then the base, and on the sides at the apex are three oblique keels. Post-scutellum strongly and closely punctured; it has a rounded slope from the base to the apex, and is on a level with the top of the median segment, which has a rather steep straight slope, with rounded sides and a deep furrow in the middle. Pleuræ punctured, but not strongly or closely; the mesopleuræ yellow, except at the apex and extreme base; the yellow is divided in two by an oblique furrow. Wings almost hyaline, the costal cellule infuscated; the stigma yellowish, the nervures black. Legs clear yellow, the hinder femora slightly lined with black above. Abdomen yellow; a large black mark, narrowed and rounded laterally, on the apical half of the first segment; the base of the second narrowly, a large mark, narrowed laterally, and extending from near the base to near the apex, the greater part of the third, fourth and the whole of the sixth, black. The ventral surface, except the last segment, is black.

Comes close to *O. maculipennis* Smith.

Odynerus hyades, sp. nov.

Black, largely marked with yellow; two short lines on the mesonotum, the sides of the scutellum, the mesopleuræ largely, the sides of the petiole and two large irregularly oval marks on the second abdominal segment, yellow; legs yellow, the femora slightly lined with black; the wings hyaline, with a slight fulvous tinge; the apex smoky; the stigma and nervures black ♀.

Long: 15 mm.

Hab. Sarawak (Shelford).

Antennæ black, the scape yellowish, the flagellum brownish beneath. Head black; the clypeus, the eye incision, a large mark, narrowed in the centre above, and the outer orbits to near the top, yellow. Front and vertex rugosely punctured, the punctures running into reticulations on the sides; the space between the antennæ is yellow and smooth. Clypeus long, pyriform, its width at the base half the length; the basal part roundly convex and irregularly marked with elongate punctures; the apex transverse. Thorax black, a large mark, obliquely narrowed on the hinder part, two short narrow lines on the mesonotum, two irregular marks on the base of the scutellum on the sides, the post-scutellum broadly in the middle and the sides of the median segment, broadly, yellow. Mesonotum strongly and closely punctured; the punctures large, deeper and closer on the base than on the apex. Scutellum flat, on the same level as the mesonotum; its apex rounded; it is not quite so strongly punctured as the mesonotum, especially at the base; the post-scutellum is more coarsely punctured. The median segment is keeled down the middle; above in the middle it is stoutly irregularly transversely striated; the sides, broadly above, narrowly below, are stoutly punctured; below the middle the sides distinctly project into stout blunt teeth. The upper part of the propleuræ is irregularly, stoutly, obliquely striated; the lower part bears stout, longitudinal keels. Mesopleuræ coarsely reticulated. Metapleuræ on the upper half irregularly, closely striated. Legs clear yellow, the tarsi darker; the femora irregularly lined with black. The second cubital cellule at the top is not quite half the length of the third; the first recurrent nervure is received shortly behind the middle; the second is interstitial. All the abdominal segments have a narrow yellow line before the apex; that on the second is broader than on the others and is largely dilated backwards at the sides; on the petiole there is a large semicircular mark behind and united to it; on the base of the second laterally is a large irregularly oval mark which is incised at the base on the lower side; the petiole is coarsely, the second and third segments are finely and closely punctured; the last segment is smooth; its apex is narrowly yellow. On the second ventral segment, on the sides, is a large yellow mark, which is rounded on the inner side.

Odynerus lybas, sp. nov.

Black; a band, greatly widened laterally, on the pronotum, the basal two-thirds of the scutellum, a large mark on the mesopleuræ under the tegulæ, two oval marks on the base of the second abdominal segment, the apex of the first and second segments and a transverse line on the middle of the fourth, pale yellow; the legs for the greater part black; wings hyaline, the radial cellule, except along the cubitus at the base, and the apex of the apical cubital cellule dark smoky; the costa and nervures black. ♀.

Long: 10 mm.

Hab. Sarawak (Shelford).

Antennæ black; the scape yellow, the apical joints brownish beneath. Head black; the lower part of the eye incision, the basal half of the clypeus, two oblique marks near its apex, a mark immediately over the antennæ and a band, narrowed below, on the upper half of the outer orbits, yellow. Front and vertex closely and strongly punctured; the front thickly covered with pale pubescence. Clypeus punctured, but not closely; the top almost smooth; its apex is depressed slightly in the middle; the teeth are short, broad and short. Mandibles black; the lower half yellow, tinged with rufous towards the apex. Prothorax and mesonotum closely, rugosely and distinctly punctured; the mesopleuræ obscurely punctured; the upper half of the metapleuræ is punctured, but not strongly; both are thickly covered with pale pubescence. Legs black; the apical half of the four front femora in front, the four anterior tiibæ except behind, and a broad band on the outer side of the hinder tibiæ, yellow. Abdomen pruinose; the petiole on the dilated apical part punctured, distinctly, but not strongly, or closely; the other segments smooth; the basal spots on the second segment are large, oval and oblique.

Comes near to *O. 2-pustulatus* Sauss. There is no suture on the base of the petiole; the basal slope of the petiole is long, straight and oblique and is distinctly longer than the apical.

ANTHOPHILA.

Nomia robusta, sp. nov.

Nigra, fulvo-pilosa; alis hyalinis, apice fusco-violaceo. ♀.

Long : 14 mm.

Hab. Borneo (Shelford).

One of the larger species. Head covered with deep fulvous pubescence, the vertex distinctly punctured, less closely and more deeply at the sides than in the middle; the front is rugose in the middle, with the sides punctured as in the vertex. Face roundly projecting in the middle and strongly, but not closely, punctured above. Clypeus clearly separated from the face; its middle depressed; it is strongly, but not very closely, punctured; its apex is transverse, with the sides rounded. The pubescence on the thorax is deep fulvous and dense, especially on the pleuræ; the mesonotum and scutellum are closely and somewhat strongly punctured, the base of the scutellum less strongly than the rest. The basal area on the median segment is smooth and shining, punctured round the edges; the furrow at its base is irregularly striated, especially laterally. Legs densely covered with long bright fulvous pubescence; the apices of the tarsi rufous. Wings hyaline, with a slight fulvous tinge; the apex is smoky, with a distinct violaceous tinge, the nervures, except at the apex, are dark testaceous. Abdomen shining; the apices of the segments fringed, but not very thickly, with fulvous pubescence; the ventral segments are more thickly fringed with similarly coloured hair. The tegulæ are for the greater part rufo-testaceous, the second transverse cubital nervure has a more oblique slope than the first; the recurrent nervure is received very close to it.

Nomia borneana, sp. nov.

Black; the basal four segments of the abdomen with smooth, shining blue bands; the legs fulvous and covered with fulvous hair; the clypeus smooth, not keeled, the face distinctly tuberculated in the middle; wings hyaline, the stigma fuscous—black; the nervures paler. ♀.

Long: 11 mm.

Hab. Borneo (Shelford).

Head black; the front, the face and sides of the clypeus thickly covered with fulvous pubescence, smooth, shining and impunctate; the tubercle on the face is more prominent than usual; the labrum is fringed with long golden hair. Mandibles ferruginous, black at the apex. Thorax closely covered with fulvous hair; the post-scutellum region densely covered with fulvous hair; the mesonotum and scutellum are smooth and shining. The area on the median segment is shining, distinctly bordered behind and irregularly striated, the striæ more widely separated in the middle than laterally; the rest of the segment is opaque and densely covered with fulvous pubescence. The transverse cubital nervures are paler than usual, this being especially the case with the second. Legs uniformly yellowish-fulvous and thickly haired; the hair is paler in colour; the calcaria pallid yellow. Abdomen black; the basal four segments with smooth, shining, bare, bluish bands; the back is smooth and shining; the basal segment at the base is thickly covered with fulvous hair; the others are sparsely haired; the ventral segments are closely punctured; their apices thickly fringed with fulvous hair. The blue belts on the abdomen are slightly tinged with yellow; the furrow on the median segment is indistinct; the scape is testaceous at the base; the second cubital cellule is about one-third of the length of the top of the third; the third transverse cubital nervure is roundly curved; the first recurrent nervure is interstitial.

Comes close to *N. elegans* Sm. which may be known from it by the clypeus being coarsely punctured, subtuberculate on each side, and with a "central longitudinal depression."

Nomia leucozonata, sp. nov.

Black, the basal half of the abdomen above and the ventral surface rufous, the second, third, and fourth segments banded with white on the apex; the apex of the clypeus rufous; the legs black, densely covered with long white hair; the wings hyaline, the costa and stigma rufo-testaceous, the nervures paler. ♀.

Long: 8 mm.

Hab. Bidi, Sarawak.

Head thickly covered with pale fulvous pubescence, black, the apex of the clypeus broadly rufous; the clypeus and face strongly, but not very closely, punctured; the front is more sparsely punctured and has a narrow longitudinal keel in the middle. Mandibles rufous, black at the apex. Mesonotum and scutellum minutely and closely punctured; the post-scutellar region is thickly covered with pale fulvous pubescence. Median segment smooth, shining and bare; its sides thickly covered with long pale fulvous hair; the basal depression is not clearly bordered behind and bears narrow longitudinal keels. Legs black, thickly covered with long pale fulvous hair; the hinder tibiæ become gradually thickened towards the apex; the metatarsus is thickened. Wings hyaline; the costa and stigma testaceous, the nervures paler; the second cubital cellule is narrow; the second transverse cubital nervure is faint; the first transverse cubital nervure is interstitial. Abdomen rufous; the apical three segments (the basal two broadly) marked with black in the centre; the apices of the second, third and fourth are banded with cream-white.

Coelioxys eriocephala, sp. nov.

Black, the head and thorax rugosely punctured; the scutellum coarsely reticulated, its sides at the apex projecting into sharp spines; the basal area of the median segment aciculated, the rest of the segment closely punctured, the upper half deeply furrowed in the middle; wings hyaline, the apex from the base of the radial cellule fuscous-violaceous. ♀.

Long: 11 mm.

Hab. Kuching, Sarawak.

Head rugosely punctured, the clypeus more closely and less strongly than the rest; the cheeks, the face and apex of the clypeus covered with pale pubescence; the outer orbits and occiput are thickly covered with white pubescence; the vertex and front are sparsely haired. Mesonotum closely rugosely punctured; the scutellum is coarsely reticulated-punctured; the apex is rounded, with the sides projecting into teeth, which are twice longer than broad; its apex projects over the post-scutellum. The basal area of the median segment is coarsely aciculated; the rest is closely punctured and thickly covered with white pubescence. Mesopleuræ closely rugosely punctured and covered with white pubescence; the sides and apex are aciculated. The second transverse cubital nervure has the lower half oblique; the upper distinctly oblique and straight. Legs thickly covered with woolly hair; the basal joint of the hinder tarsi is thickly covered with fulvous pubescence. The five basal segments of the abdomen are shining, closely, distinctly, but not strongly, punctured; their basal furrows are covered with white pubescence; the basal part of the last segment is minutely, but not very closely, punctured; the narrowed apical part is closely rugosely punctured; in its centre is a smooth narrow keel. The last ventral segment is long, narrow, acutely pointed and projects over the dorsal.

There is a distinct furrow on the front; the lateral teeth on the scutellum distinctly project beyond the middle of the apex; the ventral surface of the abdomen is more strongly and closely punctured than the dorsal; the transverse median nervure is received shortly, but distinctly, behind the transverse basal. The last dorsal segment is distinctly depressed laterally at the base of the narrowed part. The second transverse cubital nervure is received shortly behind the middle of the radius; the nervures and stigma deep black.

Megachile alticola, sp. nov.

Nigra, albo-pilosa; scopa abdominisque apice supra dense albo pilosis; alis hyalinis; nervis stigmateque nigris. ♀ et ♂.

Long: 9 mm.

Hab. Matang, Sarawak, 3,000 feet.

♀ Head black; the face and clypeus covered closely with dark fulvous pubescence; the front and vertex less closely with longer black, intermixed, on the vertex, with shorter fulvous pubescence. The front is closely rugosely punctured; the vertex is more distinctly, more strongly and less closely, punctured. The apex of the clypeus is almost transverse, with its sides rounded; its sides above bear a belt of dense white pubescence. Mandibles strongly punctured; their apex broad, slightly oblique; the lower tooth is smooth, shining and sharply pointed; the subapical is shorter and blunter. Thorax closely and distinctly punctured; the mesonotum is densely covered with short black pubescence; the pronotum behind is covered densely with white pubescence; the scutellum has posteriorly long black hair. The basal area of the median segment is smooth, bare, aciculated and almost shining; and it bears a shallow furrow in the centre; the sides of the segment are thickly covered with white hair. There is a curved band of white pubescence round the tubercles; the sternum is covered with white pubescence. The hair on the legs is thick, stiff and black. Wings hyaline, their apex slightly infuscated. Abdomen black; the segments are probably edged with white pubescence; the apical two above are thickly covered with grey depressed pubescence; the scape is white.

The ♂ is similarly coloured; the hair on the face is longer and denser, and has a slight fulvous tinge; the hair on the median segment is longer and denser; the basal four abdominal segments have, on the sides at the apex, broad bands of white pubescence; the apical segment is round and has a broad projecting border on the lower side; the ventral segments are fringed with soft white pubescence and there is also a band of similar pubescence on their middle; the pubescence on the four hinder tarsi is fulvous.

Comes into Bingham's Section *F*, but cannot well be confounded with anything there described.

Megachile viriplaca, sp. nov.

Black; the head and thorax covered with fuscous-black pubescence; a tuft of long white hair below the antennæ; and the labrum is fringed with long white hair; the wings yellowish-hyaline, the nervures and stigma yellowish-fulvous. ♀.

Long: 18 mm.

Hab. Kuching, Sarawak.

Antennæ black, bare, longer than the thorax. Front and vertex rugosely, closely punctured. The hinder ocelli are separated from each other by a slightly greater distance than they are from the eyes. Between the antennæ and the top of the clypeus is a dense tuft of longish white hair; and the labrum is fringed with longer white hair. The apical tooth of the mandibles is long, curved and sharply pointed; the subapical is bluntly rounded. Mesonotum and scutellum closely punctured and covered thickly with short black hair; the median segment is thickly covered with longish sooty-black hair, as are also the pleuræ and breast. Wings yellowish-hyaline; the stigma and nervures are yellowish; the two recurrent nervures are almost interstitial; the second cubital cellule at the top is about half the length of the bottom; the second transverse cubital nervure is broadly rounded in the lower half and middle; the first is roundly curved. The hair on the legs is short and black; the base of the fore tarsi is rounded and deeply incised; the fore coxæ are stoutly toothed. Abdomen black and covered with short black hair; the middle segments are depressed at the base; the apical segment is, at the apex, roundly incised; its middle on the apical half is depressed, below the base it is roundly raised.

Megachile moera, sp. nov.

Black; the four posterior femora red; the head and thorax covered with long white hair; the abdominal segments narrowly edged with pale fulvous pubescence; the ventral scope white; the base of the hinder tarsi densely covered with long fulvous hair; the wings hyaline, the stigma and nervures black.

Long: 8-9 mm.

Hab. Kuching, Sarawak.

Head closely punctured; the face and clypeus more coarsely than the vertex; the apex of the clypeus in the middle projecting, smooth and shining; the sides of the face and clypeus thickly covered with white pubescence; the front less thickly covered with long white hair, the vertex more sparsely with shorter back hair. Mandibles closely, rugosely punctured and covered with white pubescence; towards the apex they are coarsely irregularly striated; the apical two teeth are of about the same size, are opaque and moderately acutely pointed; the rest of the outer edge is smooth and shining. Pro- and mesothorax, with the scutellum, closely and uniformly punctured; the pronotum and base of the mesopleuræ above thickly covered with woolly hair; the mesonotum has a short pubescence; the median segment is covered with long, soft hair; its basal area is closely aciculated, the rest punctured, but not strongly or closely; its middle is deeply furrowed. Wings hyaline; the first recurrent nervure is received nearer the transverse cubital than is the second. The four hinder femora and the hinder trochanters and coxæ are bright rufous; the hair on the basal four joints of the hinder tarsi is larger than usual; and it becomes gradually shorter towards the fourth joint; it is bright fulvous; the hair on the middle tarsi is shorter and paler. Abdomen closely punctured; the transverse furrows on the basal three segments are distinct; the segments are banded with pale fulvous bands of pubescence; the ventral scopa is white; the basal ventral segments are more or less rufous; the apical dorsal segment is closely rugose and sparsely haired.

The scutellum is broadly rounded behind and has a rounded slope on the apex; the depression at its base is covered with white pubescence.

Comes near to *femorata* Sm.

Megachile œola, sp. nov.

Black; the head and thorax covered with pale fulvous hair; the face and clypeus more densely with long pale hair; the abdomen densely with ferruginous pubescence, except on the base of the basal three segments; the wings almost hyaline, the stigma and nervures black; the apical abdominal segment entire. ♂.

Long: 12 mm.

Hab. Matang, 3600 feet. Sarawak.

Antennæ black, base shining. Head black, closely and strongly punctured; the lower part of the front, the face and clypeus are densely covered with long pale fulvous hair; the apex of the clypeus is transverse. Mandibles closely, irregularly longitudinally striated to near the apex; the lower part at the apex smooth and shining; the apical tooth is long and sharply pointed at the apex. Pro- and mesothorax closely and distinctly punctured and covered with long pale fulvous hair; the median segment is more thickly haired and the hair is longer; the basal area is closely punctured and has a wide and distinct furrow down the centre. Pleuræ thickly covered with long pale fulvous hair. Legs black; the four anterior tarsi are fringed with very long fulvous hair; the hair on the hinder tarsi is short and fulvous; on the rest of the legs it is short and paler. The second recurrent nervure is almost interstitial; the first is received close to the transverse cubital. The basal three segments of the abdomen are black, with their apices covered with bright ferruginous pubescence, the other segments are entirely covered with similar pubescence; the apical segment is entire and broadly rounded; the apical ventral segments are covered with fulvous pubescence.

Megachile osea, sp. nov.

Black; the face and apex of the clypeus fringed with long pale hair; the pleuræ and median segment covered densely with pale fulvous hair; the abdomen, except at its basal slope, with ferruginous pubescence; wings hyaline with a slight fuscous tinge, the stigma and nervures black; the apical abdominal segment roundly incised in the middle. ♂.

Long: 14 mm.

Hab. Matang, 3600 feet. Sarawak.

Head closely punctured; the front thickly covered with long black hair, the vertex more sparsely with shorter black hair; between the antennæ is a clump of long white hair and the apex and the clypeus is fringed with similar hair. The clypeus is shining and covered with short black hair; it is irregularly, somewhat strongly, but not very closely, punctured, and is clearly separated from the face, which is closely rugosely punctured—there is a smooth narrow shining line down the middle. The basal half of the mandibles is opaque and irregularly punctured; the apex is smooth and shining and with an acutely pointed apical tooth. Mesonotum and scutellum closely rugosely punctured and thickly covered with short black hair; the pleuræ and median segments are thickly covered with long pale fulvous hair. The apex of the scutellum is broadly rounded. The area on the median segment is opaque and shagreened; the rest of the segment is shining and closely punctured. Wings hyaline, with fuscous-fulvous tinge, and slightly clouded at the apex; the stigma and nervures black; both the recurrent nervures are received close to the transverse cubitals. Legs black; the anterior tarsi testaceous at the base; the femora and tibiæ are sparsely covered with short pale hair; the tarsi thickly with short fulvous pubescence on the under side; the anterior coxæ are toothed at the apex. Abdomen, except on the basal slope, and on the basal two ventral segments, thickly covered with bright ferruginous pubescence; the apical segment is widely but not very deeply, incised in the middle; it is broadly rounded and is not keeled down the middle.

Megachile amstela, sp. nov.

Long: 12 mm.

Hab. Borneo.

This species may be separated from *tarea*, with which it agrees closely in colouration, as follows:—

The clypeus distinctly narrowed, smooth and rounded above; the base of the mandibles broadly rounded, without a projection in the middle, the outer side not strongly, uniformly punctured. *tarea* Cam.

The clypeus not distinctly narrowed above, where it is strongly punctured, and where there is a smooth, transverse keel; the outer side strongly punctured; the inner side on the basal part projecting in the middle. *amstela* Cam.

Head strongly, closely, rugosely punctured; the top and apex of the clypeus with a smooth, impunctate band; its hair black; long and dense on the front and vertex, shorter on the clypeus. The clypeus is distinctly separated from the face by a smooth, shining band, the sides being also bounded by similar bands; its apex projects slightly and roundly at the sides. Mandibles rugosely punctured, irregularly, strongly, longitudinally striated towards the apex; the apical edge and the lower on the apical half, smooth and shining; the apical tooth is large; the subapical is shorter and broader. Thorax closely punctured; the hair on the pleuræ, mesonotum and scutellum is black; on the median segment it is long and soot-coloured; on the sternum pale fulvous. Wings hyaline, with a slight, but distinct fulvous tinge; the nervures are blackish, the stigma dark rufous. Legs black; the hair pale, mixed with black; on the base of the tarsi it has a slightly more rufous tint. The abdomen is black; its basal three segments are banded with bright ferruginous pile; the other segments are thickly covered with bright ferruginous hair, mixed with black in the middle; the scopa is ferruginous.

On the outer side of the apex of the tibiæ, in the middle, is a longish, sharp-pointed spine.

Megachile tarea, sp. nov.

Black; the head covered with black, the pleuræ and metanotum with pale, pubescence; the abdominal segments banded with ferruginous pubescence; the scopa fulvous, rufous towards the apex; the legs covered with fulvous, the metatarsus on the inner side with rufous, pubescence; wings hyaline, the apex slightly infuscated, the costa and nervures dark fuscous. ♀.

Long: 12 mm.

Hab. Borneo.

The hair on the upper part of the head is deep black; below long and white; on the front and cheeks it is longer and denser than on the face and vertex. The clypeus is narrowed and rounded above, where it is smooth and impunctate, or only sparsely, and indistinctly punctured; the lower two-thirds punctured, but not closely or strongly; there is a narrow, impunctate band in the centre; the centre, in the apex, is not quite transverse. The mandibles are broadly, roundly dilated in the middle; there are two apical teeth; the apical is the longer; the subapical is broader and more rounded; their upper side is irregularly punctured; on the inner side is a row of punctures, on the outer, on the apical half, a curved deep furrow; the basal half on the outer side is strongly punctured, the punctures becoming larger and more elongated towards the middle. Thorax closely and distinctly punctured, the pleuræ somewhat more strongly than the mesonotum. Legs black; the hair on the femora and tibiæ is long and pale; on the tarsi it is dense and rufous; the anterior calcaria rufous; the outer joint is straight, transverse, and not dilated at the apex; the subapical is curved and surrounded by a hyaline horny process; the claws are rufous at the base.

On the apex of the fore tibiæ in the middle is a large, platelike projection, which becomes gradually narrowed towards the apex, is rufous in colour and has the sides raised; on the outer side of it is a stout tubercle.

Megachile Shelfordi, sp. nov.

Nigra, opaca, nigro pilosa; alis flavo-hyalinis, apice fumato; nervis stigmateque fulvis. ♀.

Long: 17 mm.

Hab. Borneo (Shelford).

Front and vertex closely and uniformly punctured, thickly covered with black hair, which is much longer on the front. The clypeus is rather strongly, closely and uniformly punctured, except above in the middle, where it is smooth and shining. Mandibles below smooth and shining, above closely punctured; there are four teeth, all bluntly rounded; the inner two project more than the apical. The upper part of the thorax is thickly covered with short, stiff hair; the hair on the pleuræ is longer, is thick and sooty-black in colour. The hair on the legs is long and black; on the under side of the middle tarsi it is bright rufous. The hair on the abdomen, above and below, is deep black; the second segment at the base is deeply depressed, at the apex obliquely raised; the last segment has the apex depressed and broadly rounded. Wings yellowish-hyaline, the stigma and nervures rufo-fulvous; the apex, outside the radius, the second transverse cubital, the second recurrent and the discoidal nervures, smoky; the apex of the hind wings is likewise smoky.

Comes near apparently to *M. tuberculata* Sm.

Protoanthidium rufobalteatum, sp. nov.

Black; the head and thorax densely covered with stiff, moderately long black hair; the apical two segments of the abdomen entirely, the middle segments banded with rufous-yellow; the ventral fringe bright ferruginous.

Long: 12 mm. ♀.

Hab. Matang, 3600 feet. Sarawak.

Antennæ black, short, smooth and shining. Head closely rugosely punctured, the clypeus more finely than the vertex; in front and above closely covered with short, black hair; below with longer, soft, pale hair. The clypeus is distinctly, narrowly keeled in the middle; the apex of the clypeus is transverse, its sides are rounded. Mandibles opaque, closely rugose above, below covered with a pale fulvous pile and below also with some long pale hair; the apical tooth is bluntly rounded and projects; behind it are three short, bluntly rounded teeh. Thorax closely and somewhat strongly and uniformly punctured;

above the hair is black; on the sides it is longer and whitish; the scutellum distinctly projects over the median segment; its apical incision is rounded and not very deep. Legs black; the hair on the tibiæ and tarsi is thick and stiff; on the inner side it is rufous, the apical three joints of the tarsi are rufous. Wings hyaline with a faint, fulvous tinge; the stigma and nervures are black. Abdomen black; there is a narrow rufous line on the sides of the second segment; an almost entire one on the apex of the third, a broader one, narrowed at the sides, on the fourth and the whole of the apical two segments are rufous. The ventral scopa is bright ferruginous.

The ♂ has the antennæ much longer; there is a dense mass of white pubescence over them; the clypeus, the cheeks, on either side of it, and the mandibles, except at the apex, are rufous-yellow; the apical abdominal segment is roundly, but not deeply, incised. The mandibles are bidentate at the apex; the apical is more narrowed at the apex than the subapical, which is shorter, broader and more broadly rounded; the clypeus is slightly depressed in the middle at the apex.

Protoanthidium ovatum, sp. nov.

Black; the hair on the thorax and abdomen black; there is a tuft of fulvous hair on the front; the face and clypeus are covered with short rufous pubescence; the scopa rufous; the wings to the stigma smoky, the apex milk-white, the stigma and nervures black. ♀.

Long: 14 mm.

Hab. Matang, 3600 feet. Sarawak.

Antennæ black, the under side of the scape rufous. Front and vertex closely, uniformly and strongly punctured; the face is less closely and less strongly punctured; its apex and a line in the centre, smooth. Clypeus closely and uniformly punctured; its middle keeled, but not very strongly; its apex slightly bent inwardly. The lower part and the apex of the mandibles are smooth and shining; the rest punctured and pilose; besides the apical tooth, there are three short, round ones. Mesonotum and scutellum closely and uniformly punctured; the mesonotum thickly covered with fuscous-black pubescence; the apex of the clypeus is roundly incised and projects over the median segment which is closely, but not strongly, punctured, and is shining in the middle. Legs black, and thickly covered with black hair; the calcaria black. The wings, to the stigma, smoky-fuscous; the rest milky-hyaline; the stigma and nervures black; the first transverse cubital nervure is straight and has an abrupt oblique slope; the second is two-angled, the upper is the longer and is more oblique; both the recurrent nervures are received distinctly beyond the transverse cubitals. Abdomen black; closely but not strongly, punctured above and covered, but not densely, with short black hair; the apical segment is roundly incised; the ventral scopa is fulvous.

Protoanthidium rufomaculatum, sp. nov.

Black; the clypeus and the antennæ rufo-testaceous; the top of the head and the mesonotum with the scutellum thickly covered with rufo-fulvous pubescence; the scopa rufo-fulvous; the apical-dorsal segment covered with whitish pubescence; the wings dark smoky-fuscous to the base of the stigma, lacteous beyond it. ♀.

Long: 8 mm.

Hab. Kuching, Sarawak.

Antennæ shining, base rufous, the second joint black. Head closely, rugosely punctured; above thickly covered with short rufous pubescence; the face and clypeus with soft, paler hair. The apex of the clypeus on the lower side is flat, smooth and shining. Mandibles rufo-testaceous, the lower edge of the apex black; it is sparsely punctured; its apical tooth is large, is sharply pointed and clearly separated from the subapical, which is short, does not project and is not defined behind. Mesonotum closely, uniformly and somewhat strongly punctured; there is an impressed line down its centre. The scutellum is flat, is not raised above the level of the mesonotum, and its apex projects largely over the median segment; it is more closely punctured than the mesonotum; its sides and apex are broadly rufous and the apex has a shallow, rounded incision in the middle. The median segment has a vertical slope, is closely punctured and covered with a short pubescence. Mesopleuræ closely punctured like the mesonotum; the base of which is smooth, projecting. Legs black; the hair black; the greater part of the front femora, the apex of the front tibiæ and the base of the tarsi, rufous, as are also the apical joints of the hinder tarsi; the hair on the hinder tibiæ and metatarsus long, black and thick; the fore tibia at the apex on the outer side is armed with a short narrow tooth. The radial, cubital and recurrent nervures are pale; the first transverse cubital nervure is straight and oblique; the second is roundly curved; both the recurrent nervures are received shortly, but distinctly, beyond the transverse cubitals; the second recurrent nervure has the upper part roundly bent outwardly. The basal five dorsal segments of the abdomen are smooth, shining; the basal ones minutely and closed punctured and almost bare; the large apical segment is thickly covered with glistening grey hair and is rounded at the apex; the scopa is rufous.

Xylocopa Shelfordi, sp. nov.

♀ Black, the thorax above, the upper parts of the pleuræ and the basal two segments of the abdomen clothed with bright yellow pubescence; the wings hyaline, iridescent, the apex infuscated. The ♂ with the sides of the thorax and a broad band on the basal three segments of the abdomen clothed with bright yellow pubescence, otherwise coloured as in the ♀.

Long: 16 mm.

Hab. Matang, 3,600 feet. Sarawak (Shelford).

♀ Head densely covered with black hair; the black hair on the face mixed with white. Front and vertex closely and distinctly punctured; the furrow on the front is distinct; its lower half is bordered by distinct, flat, smooth keels; the clypeus is more strongly punctured than the face and has a smooth flat furrow in the centre. Mandibles smooth and shining: the basal half in the centre punctured: the apical teeth bluntly pointed and of almost equal length. Thorax above smooth and shining; the centre of the mesonotum and metanotum bare and impunctate; the apex of the latter sharply margined. The pubescence on the upper part of the mesopleuræ is yellow; on the hinder edge it is paler; on the rest and on the sternum, black; legs black and covered with black hair; abdomen black; the upper surface of the basal two segments covered with yellowish hairl the other segments clothed more sparsely with shorter black hair. Wings hyaline, with a slightly fuscous-coppery iridescence; the apex much darker coloured.

The ♂ has the upper part of the thorax covered with yellowish pubescence except in the centre, where there is a broad band of black pubescence of the same width as the lateral bands; and on the apex, where there is a thin band of pale yellow pubescence; the upper part of the pleuræ is covered with pale yellow pubescence; the tarsi are thickly covered with long black hair; the black hair on the tarsi is mixed with rufous beneath, on the tibiæ with pale, hair. The hair on the sides of the inner and outer orbits is pale.

I believe I have correctly united the sexes of this species. Both are in the Sarawak collection from Matang, where the ♀ has also been taken by Mr. Shelford at an elevatiou of 3000 feet. The ♂ agrees, in the arrangement of the hair bands, with that of *X. perversa* Weid. from Java, but the females are different.

Trigona erythrogastra, sp. nov.

Black; the basal three segments of the abdomen rufo-testaceous, the others black, suffused with rufo-testaceous, especially at the sides; the wings yellowish-hyaline to the stigma, the rest hyaline; the stigma and nervures rufo-testaceous. ♀.

Long: 7 mm.

Hab. Sarawak (R. Shelford).

Antennæ black, the flagellum brownish beneath, more broadly and distinctly on the apical than on the basal half. The occiput and the hinder part of the vertex are thickly covered with long black, stiff hair; the front is covered with a dark fuscous, thick pubescence and above sparsely with black hair. Clypeus thickly covered with fuscous down and smooth and shining. Mandibles black, smooth and shining. Thorax black, smooth and shining; the base of the mesonotum and the hinder part of the scutellum covered with long stiff black hair; the propleuræ covered sparsely with long black hair; the metapeluræ thickly with a fulvous down. The first transverse cubital nervure is faint above and almost obliterated in the middle; the second is very faint. Legs black; their hair is also black. The ventral surface is rufous.

Comes near to *T. lacteifasciata* Cam. but that has the second cubital cellule narrower at the top; the thorax rufous and the femora rufous.

Trigona flavistigma, sp. nov.

Rufo-testaceous, the hinder tibiæ and the basal joints of the four hinder tarsi black; wings hyaline, the basal half with a distinct yellowish tint; the stigma fulvous yellow, the nervures slightly darker in tint; antennæ rufo-testaceous, the apical four joints black. ♂.

Long: 8 mm.

Hab. Kuching, Sarawak.

Head smooth and shining; the front and vertex sparsely covered with long black hair; the hairs on the vertex longer than those on the front. Cheeks and clypeus covered with golden pubescence; the clypeus also sparsely with black hair. Mandibles rufous, blackish at the apex. The thorax is narrower than the head and is similarly coloured; the mesonotum and scutellum are sparsely covered with blackish hair; the sides and apex of the former have a yellowish down; the pronotum is glabrous in front, sparsely haired behind; in the centre, at the base, is a wide depression. The apical slope of the scutellum is thickly covered with long pale fulvous hair. The centre of the metanotum is very smooth, shining and glabrous; the mesopleuræ thickly covered with long, pale fulvous hair. The wings have a distinct yellowish tinge to the base of the stigma; the stigma and nervures are bright rufo-fulvous. Legs coloured like the body: the hinder tibiæ and the basal joints of the four hinder tarsi black; the hair on the black part of the legs is black. Abdomen coloured like the thorax; its base lighter in tint; the ventral surface is darker and is thickly covered with long blackish hair.

Trigona latebalteata, sp. nov.

Black; the base of the scape, the basal and the apical two segments of the abdomen rufo-testaceous; the anterior legs, the middle coxæ, trochanters, femora and the tibiæ in front; the hinder coxæ and trochanters beneath, rufous, the wings clear hyaline, the stigma and nervures testaceous. Worker.

Long: 5 mm.

Hab. Kuching. Sarawak.

Head black, the apex of the clypeus pale testaceous; the front, face and clypeus covered thickly with pale pubescence; the front has a narrow furrow down the centre; the labrum is testaceous; mandibles pale rufous, blackish towards the apex; the occiput is fringed with long fusco-rufous hair. The mesonotum is bordered all round by a distinct belt of fulvous pubescence; there is a broader belt on the sides and apex of the scutellum; the post-scutellum is covered with short fulvous pubescence. Median segment closely, uniformly and distinctly punctured. Pleuræ covered with fulvous pile. Wings clear hyaline; the stigma pale, the nervures of a deeper testaceous colour; the two transverse cubital nervures are faintly indicated, the first more distinctly than the second. Antennæ black, the base of the scape broadly testaceous. Abdomen smooth and shining; rufo-testaceous; the second, third and fourth segments deep black.

Trigona lacteifasciata, sp. nov.

Dark luteous, the head, except the centre of the clypeus, the flagellum of the antennæ and the tibiæ and tarsi, black; wings hyaline, a milky cloud at the end of the stigma; the stigma and nervures luteous; there are two transverse cubital nervures, which are straight, oblique and approach close to each ther near the top. ♀.

Long: 8-9 mm.

Hab. Borneo.

Antennæ black: the basal two-thirds of the scape rufous. Head black, the clypeus broadly, in the centre rufous; the front, face and clypeus thickly covered with a pale down; the hinder part of the occiput thickly covered with stiff blackish hair. Mandibles black. Thorax dark rufous, thickly covered on the mesonotum and scutellum with short, stiff, dark fulvous hair, which is thickest and longest on the base of the mesonotum. Median segment smooth and shining and is bare in the middle. The coxæ, trochanters and femora are coloured like the thorax; the tibiæ and tarsi black, except the apical joint of the tarsi; and they are covered with black hair. The basal two joints of the tarsi are mahogany coloured; the others are darker in tint; the ventral segments are similarly coloured and are sparsely covered with longish fuscous hair.

Description of New Species of Aculeate Hymenoptera from Borneo.

BY P. CAMERON.

ANTHOPHILA.

Nomia varibalteata, sp. nov.

Black; the head and thorax densely covered with fulvous pubescence; the abdomen with five blue, mixed with red, bands: legs black, the wings hyaline, with black stigma and nervures ♂.

Long: 11 mm.

Hab. Borneo.

Antennæ black, the scape sparsely covered with fulvous hair, the flagellum with a pale down. The front to the ocelli is closely, distinctly and uniformly punctured; the vertex smooth; both are thickly covered with long fulvous hair. The face is smooth; its sides are broadly and thickly covered with fulvous hair; the clypeus is stoutly keeled in the middle, is obscurely punctured and thickly covered with fulvous hair. Thorax thickly covered with fulvous pubescence. Mesonotum and scutellum opaque, closely and minutely punctured; the scutellar depression is covered with depressed pale fulvous pubescence; the scutellum sparsely with long blackish hair; the post-scutellar region thickly with fulvous pubescence. Median segment closely, irregularly punctured and thickly haired; the basal depression is clearly defined behind and is irregularly closely longitudinally striated. Legs black; the femora and tibiæ covered with pale hair; the tarsi on the under side thickly covered with fulvous pubescence; the hinder tibiæ are narrowed at the base and become gradually, but not greatly, thicker towards the apex. The abdomen is smooth, shining and sparsely haired above; the basal five segments are banded with blue belts, which are largely tinged in the middle with red. The ventral segments are covered with fulvous pubescence; the last segment is distinctly keeled in the centre.

The transverse median nervure is not interstitial, being received shortly behind the transverse basal; the first recurrent nervure is received shortly beyond the middle; the tegulæ are pale testaceous; the third transverse cubital nervure is roundly curved on the lower side; the punctuation on the apical half of the clypeus is coarser than on the basal and runs into striations or obscure reticulations; the sides of the last ventral segment are keeled and project obliquely at the apex; the last dorsal segment is punctured and thickly covered with black hair; its apex is smooth.

A species closely related to *N. iridescens* Sm.

Megachile zygia, sp. nov.

Black; the hair on the front, face, pleuræ and median segment, ferruginous; the abdominal segments banded with ferruginous pubescence, the ventral scopa pale fulvous; wings hyaline; the stigma and nervures rufous. ♀.

Long: 12 mm.

Hab. Borneo.

Head closely rugosely punctured; the face and upper part of the clypeus with a smooth, irrugular longitudinal keel in the centre. The apex of the clypeus is transverse, finely rugose; its sides are straight and oblique. The base of the mandibles is closely rugosely punctured, the upper apical half has, at the base, some distinct punctures: the apical and the lower half smooth; the apical tooth is large, projecting, and becomes gradually narrowed towards the apex; the subapical is blunt and indistinct; on the base are two shallow curves, the inner being the larger. The mesonotum is closely alutaceous, opaque, without distinct punctures; the mesopleuræ are coarsely rugosely punctured; the metapleuræ coarsely alutaceous. The hair on the mesonotum and scutellum is short and dark, on the upper part of the pleuræ and the median segment it is rufous; on the lower parts and on the sternum, pale fulvous. Wings hyaline, with a slight fulvous tinge; the costa, stigma and nervures are bright rufous. Abdomen black; the dorsal segments banded with a bright ferruginous pile; the scopa pale fulvous; the last dorsal segment is covered with short black hair. Legs black, covered with pale fulvous pubescence; that on the tarsi is rufous in tint; on the apex of the front tibiæ in the middle is a a stout, slightly curved spine, which becomes narrowed towards the apex; on the apex, at the base, in front of this, is a shorter tooth; the apical claws are larger and stouter than usual and rufous in colour; the calcaria are obliquely narrowed at the apex.

SPHEGIDÆ.

Sphex malayanus, sp. nov.

Black; the second abdominal segment rufous at the base; the head and thorax densely covered with golden pile and thickly with long pale pubescence; wings clearly hyaline, the stigma and nervures deep black; the apex with a deep black cloud between the end of the radial nervure and the lower end of the third transverse cubital. ♂.

Long: 14 mm.

Hab. Borneo.

The eyes distinctly converge below; the inner orbits from near the ocelli and the face and clypeus are densely covered with a golden pile and the entire head is thickly covered with long pale hair; it is impunctate; the ocelli are in a curve, are large and prominent; below them is a short, distinct keel which becomes sharply pointed at the apex; the apex of the clypeus is broadly rounded; in its centre it is distinctly depressed or furrowed; the middle is keeled. The labrum is slightly keeled in the middle. Mandibles black, rufous towards the apex; they are bidentate: the upper tooth is long, is clearly separated from the lower, which does not project, and is straight or slightly oblique at the apex; the apical tooth projects on the upper side, slightly, but distinctly; this projecting part is about three times longer than broad. The golden pile on the thorax is dense; the long pale hair is dense, long and pale; on the median segment it is not quite so thick, but is, if anything, longer. The mesonotum is alutaceous; the mesopleuræ closely and distinctly punctured; the scutellum is sparsely punctured in the middle, more closely and distinctly on the sides. Neither it, nor the post-scutellum, is furrowed in the centre; the latter is thickly covered with golden pubescence. The median segment is closely, finely, distinctly and irregularly reticulated; the apical slope is largely hollowed. Legs black, pruinose;

the femora and coxæ covered with long, soft white hair; as with many species the apex of the hinder tibiæ has a rufous pile; the tarsi are spinose. Wings clear hyaline; the nervures and stigma deep black; the cloud commences at the end of the radial cellule and extends behind to the cubitus; the angle formed by the bending back of the third transverse cubital nervure is hyaline. Abdomen black; the second segment more or less rufous; the petiole is long and curved; it is, if anything, longer than the hinder tibiæ and is covered with long white hair. The apices of the segments are testaceous all round and more broadly below than above.

There are two teeth on the tarsal claws. The third cubital cellule at the top is not much shorter than the second; at the bottom it is longer than it; the second recurrent nervure is received close to the second transverse cubital; the first at three times greater the distance from it. The species comes near to *S. maria* Bing. and *S. nigellus* Sm.

Cerceris excavata, sp. nov.

Black; the lower inner orbits, the apex of the third and of the sixth abdominal segments, pale yellow; the four anterior tibiæ and tarsi and the base of the hinder tibiæ, yellow; wings hyaline; the radial cellule and the apical cubital cellule above, smoky; the area on the median segment not clearly defined, rugosely longitudinally striated. ♂.

Long: 7 mm.

Hab. Borneo.

Antennæ black; the scape pale yellow beneath; the eight basal joints and the apical joint of the flagellum reddish-brown. Front and vertex rugosely punctured as is also the clypeus and, to a less extent, the face; there is a broad yellow line, roundly narrowed at the top and bottom, on the lower inner orbits; the apex of the clypeus is slightly waved in the centre, the sides are thickly fringed with stiff longish pale golden hair. Antennal keel acute, and black and yellow. Thorax coarsely rugosely punctured, black; a spot on either side of the pronotum behind; the scutellum is smooth behind; the median segment is coarsely rugosely punctured; the punctures are round and deep; the apex is hollowed in the middle; the basal area is not clearly defined; there is a stout longitudinal keel and two less distinct oblique ones on either side of it. Wings hyaline, the radial cellule and the greater part of the apical cubital cellule, smoky; the petiolated cellule is about one half the length of the following; it receives the recurrent nervure distinctly behind het middle. The four anterior tibiæ and tarsi are yellow; the mid tibiæ are marked behind with black; the hinder are black, except for a yellow band near their base and the metatarsus. Abdomen closely and coarsely punctured; black, the apex of the third and of the sixth segment banded with yellow; the pygidium is broad, coarsely punctured; its apex transverse, depressed, membranous, except at the sides; the epipygium is depressed. The third ventral segment is banded broadly with yellow in the middle.

A distinct species, not very nearly related to any of the described Indian species. Characteristic is the "enclosed space" at the base of the median segment which is less clearly bounded than usual and is longitudinally and obliquely coarsely striated and the excavated middle of the median segment.

SCOLIIDÆ.

Scolia pulchrivestita, sp. nov.

Black; the head and thorax densely covered with fulvous hair and with a dense golden pile; the basal segments of the abdomen with blue and purple tints; the segments edged with pale fulvous hair; the wings fulvous-hyaline; the fulvous tint deeper along the apex; the stigma and nervures deep fulvous. ♀.

Long: 27 mm.

Hab. Borneo.

Antennæ black, the scape covered with pale fulvous hair. The vertex behind and in the centre is strongly and closely punctured, and there are a few punctures on the outside of the ocelli; the upper part of the vertex is smooth, bare and furrowed in the middle; the lower part is punctured and thickly covered with fulvous hair. The clypeus is smooth, base, subtriangular and flat; its apex is flat, broadly rounded and piceous; the apex of the mandibles broadly rufous. Thorax densely covered, except on the apical slope of the median segment, with pale golden pile and with longish fulvous hair. Mesonotum, except in the middle behind, strongly punctured; the scutellum is more closely punctured, except on the apex and in the middle at the base; the post-scutellum is closely and strongly punctured, except in the middle. The basal part of the median segment is closely, but not strongly, punctured. The second transverse cubital nervure is broadly and roundly curved outwardly below the middle. Legs black, thickly covered with fulvous hair; the tibial and tarsal spines are rufous; the calcaria pale; abdomen black; the basal three segments with violet and blue micaceous tints; the basal segments thickly covered with long pale hair; smooth; the apical fringes are pale; the hair on the apical three segments is long and black; the pile on the pygidium is black.

Comes near to *S. acutinerva*; it is a stouter built insect; its clypeus is flat, not roundly convex; its second transverse cubital nervure is broadly rounded and the abdomen wants the yellow bands.

Scolia apherema, sp. nov.

Black; the front and vertex, the eye incision and the outer orbits, orange-red; wings fuscous-violaceous. ♀.

Long: 17 mm.

Hab. Borneo.

Antennæ black; the scape and second joint smooth and shining, the flagellum opaque. Head; the front, vertex, eye incisions and the outer orbits—wide above, narrowing below—to near the bottom, orange-red. Front and vertex shining, distinctly, but not very closely, punctured, except on the hinder edge of the vertex; and somewhat thickly covered with shining fulvous pubescence. The antennal tubercles and the parts below the antennæ deep black; the clypeus smooth and shining, the rest closely and rather strongly punctured. Mandibles black, smooth. Thorax above thickly covered with stiff black hair; the apical slope of the median segment is covered with white hair and densely with silvery pubescence; the propleuræ covered with long dark, the meso- with long pale, pubescence; the metapleuræ thickly covered with silvery pile. Mesonotum strongly and closely punctured; the middle behind smooth; the scutellum is strongly, but not very closely, punctured; the post-scutellum is more closely and regularly punctured. The basal region of the median segment is closely punctured except the basal lobes at the base. Legs black; the femora and tibiæ thickly covered with long pale, mixed sparsely with black, hair; the spines on the four front tibiæ are bright rufous, on the hinder black. Abdomen black; the second and third segments have distinct violaceous tints; the pubescence on the dorsal segments are black, mixed with pale hair; on the ventral segments the hair is longer and paler; the apex of the petiole is strongly punctured; the rest of the abdomen smooth; the segments are not distinctly fringed with hair on their apices; the stiff pile on the pygidium is black mixed with white.

Comes nearest perhaps to *S. humeralis* Sauss. which differs from it in having the wings of a deep blue-violet tint; in its pronotum being broadly rufous; in the mesonotum and scutellum not being so strongly and closely punctured, the apical halves of these being impunctate; the abdominal segments want the blue-violet tints and the abdomen is longer compared to the length of the head and thorax.

✓ *Scolia (Discolia) thyatira*, sp. nov.

Black; largely tinted with violet and purple tints; the front, vertex, upper part of the occiput, a small spot below the antennæ in the middle, an oblique broad mark on either side of the top of the clypeus, the pronotum broadly above and a large broad mark narrowed and rounded behind, on either side of the base of the third segment, bright orange, the wings uniformly fuscous-violaceous ♂.

Long: 22 mm.

Hab. Borneo.

Antennæ black, the scape, shining and covered with black hair, the flagellum opaque. The entire vertex, front, and the upper part of the outer orbits, orange yellow; strongly, but not very closely, punctured, and covered rather thickly with long fulvous hair. The clypeus is more sparsely punctured and its apex is impunctate; the two orange marks are large, covered, and almost unite above; the hair on the face is black, on the clypeus pale. The hair on the thorax is dense, stiff and black; the punctuation on the mesonotum is close, almost uniform and distinct; this is also the case with the scutellum, except on its apex, which is smooth. The post scutellum is less strongly punctured. The median segment is more violaceous in tint than the mesonotum; it is smooth and is covered rather thickly with black hair except laterally at the base. Mesopleuræ thickly covered with black hair. The wings are uniformly dark fuscous-violaceous and are without a very brilliant lustre. Legs thickly covered with black hair. Abdomen covered like the thorax and with voilet, green and blue tints and lightly iridescent; it is thickly covered with black hair except on the second and third segments where the hair is much sparser and shorter; on the base of the third segment are two broad orange marks, which are obliquely narrowed laterally. The frontal furrow is smooth and is deeper and more distinct above and below than in the middle; the orange on the front extends into the eye incisions; the two yellow marks on the clypeus vary in extent; the lateral furrows on the apex are distinct; the two orange marks on the third abdominal segment vary in size and form.

Comes near to *S. bioculata* Sauss. and *S. fulvifrons* Sauss.

MUTILLIDÆ.

Mutilla gispa, sp. nov.

Black; the thorax and the base of the mandibles red; the third abdominal segment covered with silvery pubescence, two irregularly oval marks of silvery pubescence on the base of the second segment; the pygidium laterally covered with long silvery hair ♀.

Long: 11 mm.

Hab. Borneo.

Scape of antennæ shining, sparsely punctured and covered with white hair; the flagellum opaque, covered with a microscopic down; the terminal joint is brownish; the third joint is nearly twice the length of the fourth; the antennal tubercles rufous. Front and vertex coarsely rugosely punctured: the punctures on the front running into reticulations. Face and clypeus smooth and shining; the apex of the clypeus with a broad shallow incision. Mandibles black, rufous at the base; the apical tooth is long and does not taper much towards the apex, which is rounded ; the subapical tooth is rounded at the apex, does not project much and is not defined behind. Palpi long, dark testaceous and thickly covered with pale yellowish hair. Thorax slightly, but distinctly, narrower than the head ; rounded at the base, almost transverse at the apex ; it is fully twice longer than wide ; its sides above irregular, not contracted ; above it is coarsely rugosley punctured and sparsely covered with longish black hair ; the pleuræ are smooth and shining ; there is a stout curved keel in the centre of the propleuræ. Above the base of the middle coxæ is a stout keel, which extends upwards to the middle : the lower edge is less distinctly keeled. Legs black, covered sparsely with long white hair ; the tibial spines are black and stout ; the tarsal bright rufous ; the calcaria pale. Abdomen black ; the basal segment short, becoming gradually wider towards the apex, above covered with long pale hair ; the basal segment is thickly covered with shorter black hair ; there are two irregular oval marks of silvery pubescence on the base of the second segment, which is thickly covered with black hair, long at the base, shorter on the remainder ; the third segment is covered with silvery pubescence ; the basal two-thirds of the pygidium is irregularly longitudinally striated ; the apical third smooth ; the sides are thickly covered with long pale hair. The keel on the basal ventral segment does not reach to the middle of the segment, is stout, is rounded at the base, its apex with a vertical slope ; near it the sides bear some large round punctures ; above the middle is a complete curved keel with a shorter one below on the apical half. The second and following segments are thickly fringed with silvery pubescence, the epipygium is punctured ; the apex is smooth and is roundly incised in the middle.

Occasional Notes.

DIALECTS OF THE MALAY PENINSULA.

I have been engaged for some time past in an attempt to collect and compare the various dialects of the Wild Tribes of the Peninsula and shall be much indebted to anyone who will furnish me with fresh material on the subject, with a view to its being embodied in a forthcoming publication. Any vocabularies, grammatical notes, specimens of sentences with literal (verbatim) translations, and even lists of personal names, would be welcome, if accompanied by a clear statement of (1) the name of the tribe to which they refer; (2) its location (district and state, and approximate position on the map) and, if possible, (3) a short description of its physical characteristics.

I venture to appeal to members of the Society, or their friends, who may have collected such information, but have not the leisure or the inclination to work it up themselves, to assist me in this way in the work of collating these dialects. Much valuable material remains unpublished and is ultimately lost because men, who have been at some trouble to collect it, keep it back with a view to completing it with additional matter which they eventually have not time to collect.

I am particularly in want of specimens of the aboriginal dialects of the Negri Sembilan and Pahang, but any information relating to the aborigines of the Peninsula will be most welcome.

While on the subject of dialects, may I venture to draw the attention of the members of the Society to the importance of accurately recording the various dialects of Malay which are spoken in the Peninsula. Apart from a few scrappy notes about the pronunciation of certain letters, practically nothing has been done in this department. There are now, however, in most districts of the Peninsula, Europeans well qualified by a more than adequate knowledge of standard Malay, and if each of them were to compile a record of the local peculiarities of the dialect spoken in the particular district where he was stationed, the result would be an invaluable contribution to the scientific study of the Malayan languages. Local dialects, which were formerly neglected under the mistaken idea that they were mere corruptions of the standard or written language, are now recognized to be of great importance from the philological point of view, and in many countries they are being accurately recorded and studied. It is regrettable that in this respect we should lag so far behind the Dutch, who have by this time compiled more or less adequate records (some of them in every way admirable) of almost every language and dialect spoken in their vast section of the Archipelago. To take one instance, of which I have some slight personal knowledge: we possess an excellent Dutch dictionary of Menangkabau Malay and a goodly number of specimens in prose and verse, of that curious and interesting dialect, yet, though this same dialect, with slight variations, is spoken in Naning (Malacca) and the Negri Sembilan, where scores of Englishmen have heard it spoken, we have no adequate English record of it.

What is wanted, among other things, is an accurate account of

(1) peculiarities of intonation and accent;
(2) peculiarities of pronunciation of particular syllables, especially finals;
(3) grammatical and syntactical peculiarities, if any, *e. g.* the use of prefixes or suffixes different from those of ordinary Malay; and differences in the construction of sentences;
(4) preference for one of two synonyms where the standard Malay prefers the other;
(5) the use of words with a meaning differing from that which they have in the standard language:
(6) local words, simple and derivative, not found in the standard language;
(7) local phrases, turns of speech and idioms.

Another subject which needs working up is that of place-names, both those that appear to be Malay and such as have no meaning in Malay and are probably in some cases Aboriginal.

These latter may eventually throw considerable light on that dark subject, the condition of the Peninsula prior to the Malay immigration.

I need hardly add that though I have specially dwelt on the Malay Peninsula, as the immediate domain of the Society's scientific interests, yet I do not mean to underrate the importance of contributions relating to other Malayan countries.

C. O. Blagden.

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A Malayan Element in some of the Languages of Southern Indo-China.

By C. O. Blagden.

In a former paper I endeavoured to point out that the aboriginal dialects of the Malay Peninsula show distinct traces of an Indo-Chinese element, impressed upon them, probably at a fairly early date, by the intrusion from Southern Indo-China of a race of Mon-Annam stock speaking a language which was closely allied to that of the Peguans and Cambojans.* The object of the present paper is to introduce the readers of this Journal to what may perhaps be appropriately described as the converse phenomenon, namely, the persistence (from a still remoter era) in some parts of Southern Indo-China, of distinct relics of an independent group of Malayan dialects, underlying the now dominant Indo-Chinese languages of that region.

As might be expected, the modern representatives of this group are far from being pure Malayan tongues: they exhibit obvious traces of the Mon-Annam and other influences to which they have for many centuries been subjected, and it is by no means certain that, in their present mixed condition, they can all claim to be classified in the Malayo-Polynesian family of languages. But whether that claim, which is sometimes made for them by French scholars more familiar with the Indo-Chinese than the Malayan languages, could be substantiated or not; whether, that is to say, these mixed dialects are to be regarded

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* This subject has been learnedly and (so far as the materials at his disposal permitted) exhaustively handled by the Rev. Father W. Schmidt in a recent paper "Die Sprachen der Sakei und Semang auf Malacca und ihr Verhältnis zu den Mon-Khmet-Sprachen", which appeared in Bijdragen tot de Taal-hand-en Volken-Kunde van Nederlandsch-Indië Vol. LII (Series 6, part 8) Fasc. 3-4 (The Hague, 1901).

It remains to be seen whether the author's conclusions will stand the test of the further evidence that can be adduced; but at any rate he has marshalled the evidence that was before him with admirable skill and scientific acumen.

MALAY SUPERSTITIONS.

EVERY division of the human race has superstitions, but a writer in the *Straits Echo* is of opinion that Malay superstitions are among the most peculiar. For instance, when there is an eclipse of the moon or sun, the Malays abstain from taking food and perform their ablutions, in order that no contagious disease may attack them. Crows are an ill omen, and whenever a crow caw-caws near a Malay habitation it means death to some one of the inmates. Supposing a Malay walks along a road and suddenly a black cat crosses before him, he will at once turn back and walk along another path. The crossing of the black cat signifies danger involving the loss of life!

You seldom see Malays bite their nails, because this action is likely to lead the *doer* into poverty. If a Malay sees a pig or a Chinese funeral before the sun rises, say at 5 30 a.m., he knows that he is lucky and whatever he does on this day he is sure to meet with success. Dreaming of jumping a brooklet assures the dreamer that death will ensue in a short time, and in this case the unhappy man generally distributes alms to the poor so that his life may be prolonged. To see a monkey in the morning is an ill omen and signifies that the seer will lose money heavily in trade. If bees make their hive on or near your house, it is a good omen and signifies that the inmates will be prosperous. This superstition seems to have some foundation, owing to the fact that for two consecutive years, 1902 and 1903, two swarms of bees invaded the Free School and stayed on the School buildings for some hours. Soon after the arrival of the good-omened bees, news was received from England to the effect that the Free School boys had gained the Queen's Scholar-ships; so the bees brought prosperity! Malays always revere the bees and whenever a swarm visits their abode they are always ready to make room for them.

You can scarcely ever get your money from a Malay on Friday, because they believe that if they pay their creditors on a Friday, they will be overtaken by penury. Malays never shave or cut their nails on Saturday or Tuesday, because these are unlucky days, and if they *do* part with their hair or nails on these days they believe that they will be always in trouble or will die quickly. The Malay never sleeps in the afternoon, for such an action shortens life! When a rat bites a Malay's clothes, it signifies ill luck, and usually the rat-bitten clothes are given away to the poor. There is a kind of bird called by the Malays Rowk-rowk which does not build a nest, and lives in fields. The Malays say that whoever obtains a Rowk-rowk's nest will become invisible as soon as he puts the nest on his head! Of course, the Malays believe that there is such a nest, despite the fact that the bird never builds one. If a Malay feels that his right hand is itchy, he is glad because he will receive a large sum of money, and if he feels that his right eye moves, he knows that he will see a foreign friend. If tears issue from either eye, he understands that a relation of his will die, and if he too often forgets his promises to his many friends, he is aware that he will die and will shed tear rathers profusely.

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A Malayan Element in some of the Languages of Southern Indo-China.

BY C. O. BLAGDEN.

In a former paper I endeavoured to point out that the aboriginal dialects of the Malay Peninsula show distinct traces of an Indo-Chinese element, impressed upon them, probably at a fairly early date, by the intrusion from Southern Indo-China of a race of Mon-Annam stock speaking a language which was closely allied to that of the Peguans and Cambojans.* The object of the present paper is to introduce the readers of this Journal to what may perhaps be appropriately described as the converse phenomenon, namely, the persistence (from a still remoter era) in some parts of Southern Indo-China, of distinct relics of an independent group of Malayan dialects, underlying the now dominant Indo-Chinese languages of that region.

As might be expected, the modern representatives of this group are far from being pure Malayan tongues: they exhibit obvious traces of the Mon-Annam and other influences to which they have for many centuries been subjected, and it is by no means certain that, in their present mixed condition, they can all claim to be classified in the Malayo-Polynesian family of languages. But whether that claim, which is sometimes made for them by French scholars more familiar with the Indo-Chinese than the Malayan languages, could be substantiated or not; whether, that is to say, these mixed dialects are to be regarded as genuine Malayan languages overlaid with foreign accretions, or, on the other hand, as alien tongues containing a large number of old Malayan loan words, is not for the present purpose very material. In order to decide this point and to determine whether these mixed languages partake more of the Malayan or of the Mon-Annam type, a careful study of their structure and grammar would be required, but the materials for such a study are at present very deficient, and in either case these dialects even in their present state presuppose, as I intend to show, the existence of a distinct Malayan continental group established at a very remote period in the south of Indo-China.

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It remains to be seen whether the author's conclusions will stand the test of the further evidence that can be adduced; but at any rate he has marshalled the evidence that was before him with admirable skill and scientific acumen.

The chief of these languages is Cham, the language of the ancient Hindu kingdom of Champa, which in medieval times occupied the country now called Annam, and in the period just preceding its fall (which occurred in A. D. 1471) had its centre on the East coast of Indo-China about lat. 14° N., though one of its earlier capitals was as far north as lat. 17.° 37′ N. This language is still spoken in a few inland villages of the Annamese province of Binh Thuan, near lat. 12° N., and by the emigrant Cham community in Camboja; the latter is now Muhammadan in its entirety, but the Chams that remain in Annam are mostly pagans. Each group has its own dialect, but apart from slight variations the language of both is the same. It is written in a complex alphabet of Indian origin: inscriptions, both in Sanskrit and in Cham, abound in Annam, and the former go back to about the 3rd century after our era.* According

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* The Sanskrit inscriptions were dealt with in a paper "L'Ancien Royaume de Campa d'apres les inscriptions" by M. Abel Bergaigne in the Journal Asiatique (Paris) Jan. Feb. 1888.

The inscriptions in Cham, which have more interest for us, from the Malayan point of view, than the Sanskrit ones, have been dealt with by M. Etienne Aymonier in a paper "Première Étude sur les Inscriptions Tchames," in the same journal, Jan. Feb. 1891. The earliest known of these Cham inscriptions dates from about the beginning of the 9th century A. D.

In an inscription dated a little later, recording the dedication of two fields to pious uses, the expression used is *huma dua nan*, lit. "fields two those"; the word for God is *Yang*, the old word which survives in Malay *kayangan* and *sembahyang*. Most of the rest of the inscription is full of Sanskrit words, as indeed the whole series to Ptolemy the metropolis of this region was Balonga. This place can be clearly identified,* on other grounds besides mere similarity of name, with Bal-Angoué, of which the ruins situated near the coast about lat. 14° N are still in existence, and which was therefore apparently the first, or at least the earliest known, as it ultimately became the last, of the Cham capitals. Its fall is narrated, curiously enough, in the Sĕjarah Malayu, where it is called Bal, the generic Cham word for "metropolis" or "capital."

The Chams, in fact, are the remnants of what was once a highly civilized nation: they were the furthest outpost of Indian civilization on the Asiatic continent, and their country was a borderland where for over a thousand years Indian culture struggled with and was eventually vanquished by Chinese, the latter being represented by the Annamese, who though non-Chinese in origin had become civilized under Chinese tutelage.

Such is the history of the Chams in outline: but legends carry it back even further, for the Cambojan traditions, for what they are worth, represent the Chams as having been in occupation of Camboja when the Cambojans first arrived there, some centuries before the Christian era: the immigrant Cambojans are said to have intermingled at first with the Chams but eventually to have got the upper hand and driven out their king.

Physically the Chams appear to resemble the Malay and Indo-Chinese types, being described as somewhat fairer than the former. Some of them appear to show traces of Indian and Arab blood. Their language, of which a good grammar has been published, is in its present condition a mixed language containing a relatively large number of Mon-Annam elements. Some have regarded it as a Mon-Annam language saturated with Malayan loan words, others maintain that it is a Malayan language modified by Mon-Annam influences. As will appear in the sequel, I am not sure that this may not be something

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of Cham inscriptions appear to be, the language in which they were written bearing much the same relation to the spoken Cham, as Kawi probably did to the contemporary spoken Javanese.

The series extends into the 15th century, to a few years before the fall of the kingdom.

* See J. R. A. S. (1899) 665.

like a distinction without a difference; but certain it is, at any rate, that Cham contains a very large percentage (perhaps nearly 50 per cent.) of pure Malayan words; and in this respect it seems to exceed its neighbours, the dialects to be next mentioned.

It is in the hilly country bounding Annam on the west and separating it from the valley of the Mekong River, about lat. 13° and 14° N., that these three dialects are found: they are spoken by three savage tribes called respectively Cancho, Rodê and Chréai. These tribes appear to be on much the same plane of civilization as the Orang Hutan of the South of the Malay Peninsula; their dialects are unwritten, and we owe such slight knowledge of them as we possess to the investigations of the three or four French explorers and administrators who have interested themselves in them. Practically that merely amounts to vocabularies of about 120 or 150 words of each of these dialects.* Besides these, there are other dialects in this region which are apparently more or less related to the above, and of some of which even less is known: † most of them however show decidedly more relationship with the Mon-Annam than with the Malayan family, the elements which they have in common with the latter decreasing in relative importance as one proceeds north and west from the old Cham region.

The only other dialect I propose to deal with here belongs to a different quarter altogether: it is spoken by the Selung (or Silung or Salone, as they are variously called) a sea-faring race who inhabit the numerous islands that fringe the Western Shore of Tenasserim (Lower Burma) from about lat. 13° N. to about lat. 10° N., and are marked on maps with the rather highsounding title of the Mergui Archipelago.

These people may fairly enough be styled a distant branch of the Orang Laut. Their physical type, to judge from photographs, is more or less that of a rude Malayan race, with (possibly) some admixture of other elements, (of which the Indonesian may be one, as the Selungs, or at least some of them, are

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* These are given in Moura, "Le Royaume du Cambodge."

† Of the Bahnar, however, a good dictionary by Dourisboure has been published (Hong Kong, 1889). It is a Mon-Annam dialect, but contains a certain number of Malayan words.

mesaticephalic, while the true Malays tend to the *brachycephalic* type). The three wild tribes previously mentioned, I should have said, appear from descriptions and such illustrations as I have seen, to be at least in part of non-Malayan stock: some authorities have insisted much upon their Caucasian type, by which I suppose is meant that they differ considerably from the Mongoloid type of features common to both Indo-Chines and Malays.

The Selungs, whatever their race may be, are pagans in a low state of civilization, and their language is an unwritten tongue. It comprises several dialects differing considerably from one another, so that people from two islands barely eighty miles apart have some difficulty in carrying on an intelligible conversation together. Several short vocabularies* of this language have been collected at various times by different persons, and they serve to illustrate these dialectic variations: but as it is not quite clear to which dialects they respectively refer, the Selung must for our purposes be dealt with as one language. It would appear to be really a Malayan language, less mixed with other elements than are the tongues already mentioned, and its claim to be mentioned here at all rests merely on its present geographical position: but being the speech of a sea-roving race of islanders it is obvious that its position does not furnish such cogent evidence for the antiquity of Malayan elements in Indo-China as do the inland dialects previously enumerated; nor is it as closely connected with any of them as they evidently are with one another.

It may however be said to form a link in the chain between these mainland dialects and languages of the Eastern Archipelago; and that is the reason why mention is made of it here, although its existence does not really affect the main argument of this paper.

It would be merely wearisome to present a whole series of vocabularies of the five languages I have enumerated: a few words will serve to convey some idea of the nature of the Malayan elements which they contain and will exhibit the peculiar character of their relation to the Malayo-Polynesian family of languages quite sufficiently for the present purpose.

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* They are given in Anderson, "The Selungs of the Mergui Archipelago."

The numerals, which are very characteristic, are as follows:—

	Cham.	*Cancho.*	*Rodê.*	*Chréai.*	*Selung.*
One	thaa, sa	sa	sa	sa	chă, chet
Two	dvaa, dva	doa	doa	toa	twa
Three	klău	clou	to	clou	tahlow
Four	pak	pac	pac	pac	păt
Five	limœû	lema	ema	léma	lemah
Six	nam	nam	nam	nam	nam
Seven	tijuh	tuchu	cachu	tuchu	loojoo
Eight	dalapan	salapan	sapan	repan	wahlow
Nine	thalapan, salapan, samilan	doalapan	doapan	toapan	chowai
Ten	tha pluh, sa pluh	saplu	plu	plu	taplaw
Eleven	sapluh sa	saplu sa	plu sa	plu sa	taplaw-chă taplaw-chet
Twelve	saplu dva	saplu doa	plu doa	plu toa	ta plaw-twa
Twenty	dva pluh	doa plu	doa plu	toa plu	twa plaw
Hundred	ratuh	[*Not given*]		retus	allataw
Thousand	ribău	[*Not given*]		ha repou	[appān]

The *th*-[*] forms in Cham belong to the Binh Thuan, the *s*-forms to the Camboja, dialect. Presumably the double forms in Selung are also dialectic variants. The spelling of Selung is the old fashioned English, that of Cham the modern scientific system [†]; as to the rest, they are collected by French authorities but I am not quite clear on what system they are spelt.

These words are interesting as exhibiting a numeral system which, though unquestionably and obviously Malayan, is in some respects clearly more archaic than that of Malay and could not, therefore, have been derived from it. In fact, even if these words were all that we knew of the dialects in question, we should be justified in saying that they constituted a distinct subgroup of languages, not directly derived from any existing Malayan group. The forms for *one*, *two*, *four*, *five* and *six* run practically through the whole Malayo-Polynesian family almost unchanged. In *four* the mainland dialects approximate most closely, perhaps, to the Bugis *ăpak* and Madurese *ĕmpak*, unless indeed the *-k*, which appears to be unpronounced in these two languages, is to be regarded merely as a device of writing, not as the remnant of a real *-k ;* Selung agrees with the Javanese and Dayak *pat.* In *six* they all agree with the Javanese *nĕm* in the absence of the first syllable of the word (Malay *anam*) but retain the *a* of the second syllable like the Malay (also the Madurese *ănam*)*;* the Achinese and Kayan Dayak form *nam* is identical.

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[*] This *th-* is the English sound in *thing*. Some dialects of Achinese also turn *s-* into *th-* in this way.

[†] Slightly modified by the French tendencies of the transliterator. His *v* = *w* his *œ* = a sound varying between the vowels of Fr. *coeur* and *vœu*, or the two *eu* in Fr. *leureux*. But *u* is the real *u* (Fr. *ou*); *œû* is a lengthening of *œ*.

The forms for *three* agree substantially amongst themselves and (except that some have a guttural for the initial *t-*) with the great majority of the Malayo-Polynesian family which retains the old form *tolu* or *tĕlu;* but differ from Malay, which has another word, *tiga.* The nearest approximation to the Cham Cancho and Chréai forms appears to be the Bisaya (Philippines), *tló:* compare also the Sulu * *Kâtluân (= Ka-tlu-an)*, "thirty." For the guttural, compare Sulu *ĭklog*, Selung *k'loen*, with Tagalog *itlóg*, Malay *tĕlor*, "egg." The Rodê contraction *to* recurs in Sulu.

The forms for *seven*, on the other hand, differ from the typical Malayo-Polynesian *pitu* and agree subsantially with the Malay *tujoh*, save only that Selung puts *l-* for *t-* .

In both these cases, it is very noticeable that the dialects now under consideration agree substantially with Achinese *(tĕlhu* or *lhu* pronounced *tĕlhée* and *lhée*, "three;" and *tujuh*, "seven") and with some of the Dayak dialects of Borneo, for which the reader may refer to No. 5 of this Journal, where out of a list of eleven dialects, ten have forms of *tolu* for *three*, and eight of those ten agree with some others not included in the ten in having forms of *tujoh* for *seven.*

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* Between Borneo and the Philippines.

In *eight* and *nine* there is some confusion, which may be due either to the collector or to the wild tribes themselves; possibly the latter get a little mixed when they come to the higher numbers. Anyhow, they are said to use for *eight* a form *salapan* which occurs again in Sundanese (Java) and also in Mangkasar (Macassar, of Celebes), in the latter under the form *salapang*, and there means, as it ought to mean, *nine.* Oddly enough, the Minangkabau Malays use it, interchangeably with *dulapan (dĕlapan)*, and also make it mean *eight.* Vice versa, these wild tribes use variants of the Malay and Achinese form of *eight* for *nine.* Cham, it is to be observed, uses both forms correctly, but has also another form for *nine*, viz., *Samilan*, the Malay *Sambilan* (*Sĕmbilon*), which may perhaps be merely a loan word from Malay itself.

There has been, in historical times, a Malay immigration from Sumatra (and particularly, it seems, from Minangkabau) into Camboja (where this form *Samilan* is used) and the Cham and Malay communities in that country, though distinct, are in close contact with each other, and being of one religion sometimes intermarry.

It is noticeable that Selung differs from the other dialects in having preserved, though in rather uncouth shape, the original Malayo-Polynesian forms for *eight* (*walu*) and *nine* (*siwa*).

In the forms for *ten* these dialects agree substantially with the Achinese *pĕluh*, in shortening the first syllable; this does not, apparently, occur in the Bornean dialects, which in other respects show a fairly close resemblance in their numeral systems.

For *eleven* and upwards the dialects agree amongst themselves and with some of the Bornean dialects, but differ from Malay, Achinese, Javanese, etc., in not using forms compounded with *-bĕlas* (originally *-walas*, the Malay *balas*, "to repay," with the meaning "to return," i.e. to the hand on which the counting was first began).

The Selung for "hundred" apparently has the prefix *sa-* "one" reduced to *a*, which occurs also in a Cham subdialect as *ha-*. For the *-l-* of Selung *yahloam*, Malay *jarum*, "needle."

Thus while there are here particular words agreeing, each with some different Malayan languageor group of languages, the sum total of the numeral system of these dialects is quite characteristic in its individuality.

A similar state of things prevails in regard to many other common words, as the following specimens will suffice to show:—

	Cham.	Cancho.	Rodê.	Chréai.	Selung.
Dog:	*athău.*	*asou.*	*so.*	*so.*	*oiee, aai.*

Melano-Dayak *asau* comes nearest but the word, though not found in Malay (except in the expression *gigi asu*, "canine teeth") is very wide spread, e.g. Javanese *asu.*

Fowl:	*menuk.*	*menuc.*	*menuc.*	[*tus*].	*manok.* *maynauk.*

Compare the Javanese (and almost universal Malayo-Polynesian) *manuk.*

Tiger:	*rimong.*	*remong.*	*imong.*	*lemong.*	———

(The Selung word is different, viz: *pannoo*, *puuk*, which finds its analogues in aboriginal dialects of the Malay Peninsula, e.g., Tĕmbe' *ma'nu* (for which see No. 24 of this Journal, p. 17). The Achinese form is *rimong* like the Cham. I think there is no reason to doubt the identity of the word with the Malay *rimau.* Possibly the form *harimau* is a sort of Hobson-Jobson word, that is to say, really the old native Malayan word for "tiger" but twisted into its present form by a fanciful notion that it ought to mean "the beast of Hari" (*harimriga*, see Maxwell, Manual of Malay, p. 21). I confess that even Sir William's brilliant scholarship cannot convince me that his Tamil "male lion" derivation is the right one.

Elephant:	*limæn.*	*eman.*	*romon.*	*lomon.*	———

(Selung has *gazah*, the Malay *gajah*, a word of Sanskrit origin). Compare the Bulud Opie (Borneo), Javanese and Lampong (Sumatra) *liman:* this word, which is not found in Malay or Achinese, is probably derived from *lima*, the old word for "hand," the application being to the end of the animal's trunk. One of the Sanskrit names for the elephant (*hastin*) has a similar derivation; and compare also his Latin epithet *anguimanus*, "having a serpent for a hand."

	Cham.	Cancho.	Rodê.	Chérai.	Selung.
Plantain :	*patei.*	*potey.*	*umtoi.*	*phumpetey.*	———

(Selung has *pechang*, the Malay *pisang.*) With these forms compare the Dusun *pûntie*, Tagbenua *punti*, Bulud Opie *pûteh*, Kian (? Kayan) Dayak *pūtĕh* (all of Borneo), Sumbawa *punti*, Mangkasar *unti*, Malagasy *untsi*, Fijian *vudi:* not found in Malay, Javanese or (I believe) Achinese; but it is the old original Malayo-Polynesian word. *Phum* is the Malay *pohun*, "tree," Cham *phun.*

Rice :	*brah.*	*bréa.*	*brai.*	*pras.*	*pallah.* *pla.*

Malay *bĕras*: I find in a Bugis vocabulary printed in the Arabic character at Singapore, *bără'*; Achinese *bĕrĕs* (apparently pronounced *bröeh*, final *-s* in Achinese being as a rule pronounced *-h* as in Minangkabau Malay, where the word is *barèh*; in the Naning (Malacca) pronunciation, *borèh*). This word is a good instance of the rule (first formulated by the late Dr. H. N. Van der Tuuk in his "Outlines of a Grammar of the Malagasy Language," 1865) that "when the Malay and Batak equivalent word has *r* and the Tagal or Bisaya has *g*, both the Kawi and Javanese have no consonant." * The Batak form here is *boras* Tagalog *bigás*, Bisaya *bogas*, Kawi *wwas*, which last contracts to Javanese *wos*, while Balinese has *baas.* It will be noticed that Cham and its neighbours here agree most closely with the Sumatran and South Celebes type and differ entirely from the Javan and Philippine. Selung rather stands alone, as in many other words. But Selung *-l-* corresponds in some other cases to Malay *-r-* e.g. *mata-aloi* (= *matahari*), "sun;" *yahloam* (= *jarum*) "needle."

Rice (in husk) is in Cham *padai*: Malay *padi*, Achinese *padé*, Javanese *pari*, Batak *pagé*, Bisaya *palai*. Here again, Cham agrees, as regards consonants, with Malay and Achinese, but it differs here from Batak as well as from the others. †

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* This is often called "Van der Tuuk's first rule."

† These consonantal changes are regular and exemplify Van der Tuuk's second rule; see below, *s. v.* "nose."

Ox, cow: *tamor.* *lemo.* *imo.* *romo.* *l'mu*: Malay *lĕmbu*, in Achinese the same, and also *lĕmo*.

Rain: *hajan.* *ujan.* *hayan.* *yan.* *kujan.* *kuian.*
Malay *hujan*: but Batak and Javanese *údan**, Tagalog and Bisaya *olan*. Selung *k-* represents Malay *h-* in *ketam* (= *hitam*), "black" and a few other words.

Root: in Cham *ugha*, *agha* (in accordance with the peculiarity referred to below): this is not, apparently the Malay *akar* but *urat*, "Sinew." In form it is nearer to the Formosan *ugat*; Tagalog and Bisaya *ogát* than to any other forms. Batak in this word agrees with Malay.

In a sub-dialect of Cham of which specimens are given by Morice in an article entitled "Les Tiams et les Stiengs" in the "Revue de Linguistique" Vol. VII, vii, pp. 359-370, *r-* is often re-placed by *g-* e.g. *agopao* (= *saribu*) a "thousand"; *hagatou* (= *saratus*), "a hundred." In Tagalog these words appear as *libo* and *gatós* respectively.

Tongue: in Cham *dilah*, *dalah* (both being used); approaching nearer to the Tagalog *dita*, Bisaya *dila*, than to the Malay and Achinese *lidah*. Batak also has *dila*: here, therefore, Cham agrees closely with Batak and the Philippine languages but differs from Malay and Achinese.

Belly: *téan.* *tyan.* *téan.* *téan.* *kajéan.* *k'lan.*
Bisaya, Iranun and Dusun *tian*, Sulu *tiân*. *Tian* is given in some Malay dictionaries as a Javanese loan word meaning "belly (of a pregnant woman)." In Achinese *tiyĕn* means "fœtus," *mĕtiyĕn* "to be pregnant"; in Cham *mœtéan* means "pregnancy," *boh téan* (literally "fruit of the belly," Malay *buah*, Javanese *woh*, "fruit") means "family."

Hand: *tangin.* *tengam.* *cangán.* *tangin.* *lengan.*
Malay *tangan*, Dusun *lângan*, Dusun of Kimanis *longon*. For the Selung *l-* = Malay *t-*, compare *loojoo* (= *tujoh*), "seven."

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* Van der Tuuk's third rule: "when a *j* of Balinese and Malay is *d* in Batak, the Javanese and Kawi both also have *d*."

	Cham.	Cancho.	Rodê.	Chérai.	Selung.
Nose:	*adung.*	[*chnu*].	*dung.*	*dung.*	*yoong.* *yong.*

Malay and Achinese have *hidung.* Cham uses both *adung* and *idung.* Compare the Tidung (Borneo) *adung,* Dusun of Kimanis *ådung.* Javanese and most of the Bornean dialects replace this *d* by *r*; the Philippine languages (and in this word Madurese also) have *-l-* here; Batak has *-g-*. The importance of this particular set of consonantal correspondences was also first pointed out by the late Dr. H. N. van der Tuuk. They constitute his second rule:—"When the Malay and Balinese *d* of equivalent words is represented by *l* in Bisaya or Tagal, both the Javanese and Kawi have *r*." *Chnu* is probably Cambojan.

Fire:	*aprĕi.* *apuĕi.* *apui.*	*apui.*	*pui.*	*puoi.*	*appói.* *apoi.* *apoee.*

Malay *api,* but Achinese and several Dayak dialects, etc., have *apui.*

Water:	*iă,* *ear.*	*ea.*	*ea.*	*ja.*	*awĕn,* *awaen.*

Malay *ayĕr,* Achinese *iyĕr,* Madurese *aeng,* etc.

Stone:	*batău.*	*pétou.*	*bato.*	*potou.*	*batoe.*

Malay *batu,* the Achinese equivalent is written in the same way but pronounced *batée.*

The few words here given suffice to show that these dialects have peculiar points of relationship with several widely separated Malayan groups of languages and could not have been derived from any one of them. Their affinities appear to be most marked with Achinese, as is shown especially by the fact that in common with that language (and quite the opposite to Malay), they tend to throw the accent on the last syllable, which is consequently often strengthened to a diphthong, at the expense of the first, which is weakened and sometimes entirely suppressed: Compare *pluh,* "ten" with the Achinese *pĕluh* and contrast the Malay *puloh*; similarly compare the forms, in

Cham, Achinese and Malay respectively, **thun*, *tĕhun*, *tahun*, "year"; **dhan*, *dĕhĕn*, *dahan*, "bough"; *ngan*, *ngon*, *dĕngan*, "with;" *dok*, *duk*, *dudok*, "remain, dwell, sit"; and *mœtai*, *maté*, *mati*, "dead." Selung has *matai*, which form also occurs in Bornean dialects as *matei*.

It is probably owing to the same tendency to weaken the first syllable, that Cham has *hajan* for *hujan*, "rain," *akan* for *ikan*, "fish," *adung* for *hidung*, "nose," *balau* for *bulu*, "hair," and the like: and here it goes further in this direction than Achinese or any other Malayan language that I am aware of, although this vowel change appears also (but more rarely in some Bornean dialects, e.g. Tidung *adung*, "nose," Biadju Dayak *balau*, Lawangan *balu*, Siang *warlo* † [sic], "hair."

It will of course be understood that the words here given have been expressly chosen with a view to exhibiting the Malayan element in these dialects, and that alien, especially Mon-Annam forms have been deliberately avoided. The Malayan element is strongest in the substantives, but is also represented in some of the verbs and adjectives, e.g.

	Cham.	Cancho.	Rodê.	Chréai.
Buy:	*blĕi.*	*bloi.*	*bloi.*	*bloi.*
	Malay *bĕli*, Achinese, *bloi.*			
Sell:	*pablĕi* (in Cham: the rest are different): Achinese *publoi.*			
Give:	*brĕi.*	*brey.*	*broi.*	*proi.*
	Malay *bĕri*, Achinese *bri.*			
Descend:	*trun.*	*trunh.*	*trun.*	[*tumau.*]
	Malay *turun*, Achinese *trun.*			

White: *patih* (Cham); *potayak*, *patuik* (Selung): Malay *puteh.*
Drunk: *mœbuk* (Cham): Malay *mabok.*
New: *barūv* (Cham): Malay *bāharu.*
Unripe: *mœtah* (Cham): Malay *mĕntah.*‡

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* This is a different *th-* from the other: this *th-* and *dh-* are true aspirates.

† I take these examples from C. den Hamer's Proeve van eener Verglikende Woordenlijst van zes in de Z. O. Afd. v. Borneo voorkomende Taaltakken.

‡ For the present purpose it is not necessary to pursue this comparison further. Suffice it to say that the Malayan element can be traced (at least in Cham and to some extent in Selung, there being no

The main object of this paper being merely to point out the existence of Malayo-Polynesian words in these languages and not to determine the difficult question of their right to be classified as genuine members of that family, I shall pass somewhat lightly over their grammatical characteristics of which indeed, except as regards Cham, little is as yet known. Cham forms its derivative words, like the Malayan, but unfortunately also like the Southern Mon-Annam languages, with prefixes and infixes: The common ones in Cham are the prefixes: *pa*, *mœ-*, *ta-* or *da-* and infixes: *-an-*, *-nœ-* and *-am-* or *-mœ-*. Most of these reappear, in more or less similar forms, with much the same force, in Achinese; but also in Cambojan, where they are very freely used, and to some extent in Peguan.* Suffixes, corresponding to the Malay *-kan* and *-an* do not appear to be in use at the present time either in Cham, Achinese, Cambojan or Peguan; but if the derivation given above for *limœn* (*liman*) from *lima* is right, they must have existed formerly to some extent in Cham.

Prefixes.	*Achinese.*	*Cham.*	*Khmer.*	*Mon.*
Verbs of action: causal or merely transitive	pĕ-, pu-	pa-	p-, ph-	p-, ph-, b-
Verbs, generally intransitive ...	mĕ-, mu-	mœ-	?	mă-
Infixes.				
Verbs of state, intransitive ...	-ĕm-	-mœ-	?	-m-
Substantives	?	-mœ-	-m-, -amn-	-m-
Substantives	-ĕn-	-an-	-n-, -an-	[-an- ?]

In some other cases, where the forms agree, the meanings appear to differ somewhat.

The Selung dialect forms verbs by prefixing *me-* as in *metoyam*, "to smell" (Malay *chium*), *na-* as in *na-baut*, "to make" (Malay *buat*), *naleat*, "to look" (Malay *lihat*), *nadŏk*, "to sit" (Malay *dudok*, Achinese *duk*, Cham *dok*); also, apparently, by nasalizing the initial consonant, as in *nadone*, "to sleep" (Malay *tidor*) and *nakoat* "to fear" (Malay *takut*). But

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data for the other dialects) through most of the parts of speech, but the non-Malayan element is also, apparently, present in them.

* A few instances of this general correspondence must suffice: there are of course many differences in detail.

this last may possibly be due to the phonetic decay of a prefix of the form *man-* or *mĕn-* (the Malay *mĕ-*, *mĕng-*, etc.) : for a word like *mangai*, "to cry" seems to presuppose an earlier *manangai* (Malay *tangis*, *mĕnangis*) and *mawah*, "to laugh" an earlier *manawah* (Malay *tĕr-tawa*). The loss of a medial *-n-* seems more probable than that of a *-t-* : it may be, however, that the Selung in these words as in "seven" had replaced the *t* by *l*. In that case these forms probably exemplify the prefix *me-* above.

Selung has the suffix *-kan* e.g. in the word *makkān* (for *mabahkan*, *ăm-bahkan* or *mĕmbahkan*, from *bah*, to "bring," Malay *bawa*).

The ideological order of these languages is unknown to me, except that in Cham (as in the Mon-Annam languages again) it appears to agree substantially with the Malay order : the attributive adjective and the genitive follow the principal noun, the object follows and the subject precedes the verb; but in Selung the object precedes the verb, which is very strange, unless it is due to the sentences having been collected through the medium of a Burmese interpreter, in speaking to whom the Selungs may have cast their words into the Burmese order. It is curious that Andamanese exhibits the same phenomenon : but there is no evidence that the Selungs are in any way connected with the Andaman islanders : both in physique and in language the two races are quite distinct from one another.

I have already indicated the conclusion to which a necessarily rather superficial comparison of these dialects seems to me to point ; I regard them, or at least all of them except Selung, as proof positive of the establishment on the mainland of Southern Indo-China of a Malayan sub-family which must date its separate existence from a period so remote as to be coeval with the differentiation and dispersal of the existing insular language groups of at least the Western part of the Malayan Archipelago, and which formed something like a link between the Sumatra, Bornean and Philippine groups.

I think it is worth adding that the southern Mon-Annam languages, which so closely resemble the Malayan in certain of their structural forms, though by far the greater part of their vocabulary is radically different and non-Malayan, owe this resemblance, in my opinion, to the fact of their having developed on what I believe was originally a Malayan soil. The true explanation of the peculiarities which they share in common with the Malayo-Polynesian family is, I believe, that they have been formed by the synthesis of a language introduced by alien immigrants from the north with the Malayan speech of a people who then already occupied Southern Indo-China The northern invaders must have absorbed and assimilated these primitive Malayo-Polynesians and imposed upon them their alien language, which in its turn has been twisted, in the mouths of their mixed descendants, into something of a Malayo-Polynesian form, by a process that has been aptly called "inverse attraction."

The result of such an introduction of a strange tongue is, as a rule, that it becomes modified or recast into some form that comes natural to the people upon whom it is imposed: this may be illustrated by such well known cases as the Pidgin English, of the China ports, Negro English, or the Malay of many Chinese, Tamils and Europeans.

In such cases the mere vocabulary, though foreign to the speaker, is learnt readily enough; but he cannot help speaking his new tongue in the manner of his old one. He pronounces the new words in the way that comes easiest to him and utters them in what is to him the natural order, though that may not be the order proper to the language as spoken by those whose original speech it was. If it was natural to him to use prefixes and infixes in his old language, I imagine he would be apt to apply them to his acquired tongue in the same way and for the same purposes. This, to my mind, is the explanation of the curious fact that in Cambojan and Peguan we find these modes of formation, which are so characteristic of the Malayo-Polynesian family, while the difference of the material elements of language, i.e. the words themselves, prevents us from admitting an original kinship between the Mon-Annam and the Malayan families of speech.

I am afraid that this idea of the formal elements of language surviving, while the native vocabulary is gradually being superseded by foreign words, may remind some people of the persistence of the grin after the disappearance of the Cheshire cat. But the real analogy is to be found in those petrifactions where every cell and fibre of the original wood or other substance are in course of time accurately reproduced by the stony deposit that replaces them. To drop figures of speech, which, however apt, can never be conclusive, when one considers that the Malayan languages readily adopt foreign words and instinctively fit them up with Malayan prefixes and suffixes, one can almost see the beginnings of such a process as I have indicated: words like *ka-raja-an*, *bĕr-akal* or even *di-rĕport-kan* (which last can be heard any day when a Malay police officer reads from his Station report book in a Police Court) are instances taken at random, where a Sanskrit, Arabic or English loan word has been subjected to this treatment.

One has only to carry the idea out to its logical conclusion and imagine a Malayan language gradually allowing its native vocabulary to be superseded, more or less completely, by foreign loan words, and the result would be much the same as what we now find in southern Indo-China. If the process were arrested half-way, a fairly evenly mixed vocabulary would be formed, like that of Cham; a more advanced stage of change would result in something like Cambojan; while a thorough application of the same principle might end in producing a language like Peguan, where only a very small percentage of words is to be found which show any signs of kinship with the Malayan family. Nevertheless the ideological order of these languages, that is to say the order of words in a sentence, is substantially the same as in the Malayan languages* and the same system of prefixes and infixes (though not, apparently, of suffixes) still survives.

On the other hand a strong tendency is noticeable, of which it has been shown that even Achinese (Malayan language) exhibited the beginnings, to contract disyllabic words into monosyllables or at least into quasi-monosyllables, in which one of the two syllables is almost suppressed. There are also other peculiarities which distinguish the Mon-Annam from the Malayan group, e.g., a preference for hard sounds * (surds) and the occurrence of true aspirated consonants: these latter characteristics may be due to the non-Malayan element in these languages.

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* There is reason to believe that in this respect the Mon-Annam languages did not differ originally from the Malayan.

The hypothesis here put forward would account for the remarkable resemblance in structure and formal elements between the Malayan and the Mon-Annam languages, a resemblance which, so far as I know, no one has yet satisfactorily explained. † But of course it must remain a mere hypothesis until these languages have been thoroughly studied and compared with one another.

This much, however, is certain: one Mon-Annam language which cannot be accused of having been developed on Malayan soil, namely the Annamese, which grew up on the borders of Kwang Si, within the Chinese sphere of influence, does not exhibit these phenomena, but follows the Chinese system of tones, though it has not adopted the Chinese ideological order. I take it that the differences between Peguan and Cambojan on the one side and Annamese on the other are the measure of the difference between a Chinese and a Malayan environment.

Whether, however, this suggested explanation be the true one or not, there remains the fact that in Peguan, and still more in Cambojan, there are a fair number of words (too many to be due to accidental coincidence) which correspond in form with Malayan words of similar meanings. As already stated, they are generally more or less contracted or mutilated, by the weakening or entire loss of one syllable, while the Malayan languages retain them in their fuller disyllabic forms. That being the case, the presumption is that they are genuine Malayan words; and this presumption is strengthened when any of

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* Clearly, however, it is at a relatively modern date that the Mon-Annam languages have changed some of their sonants into surds: for in many cases (especially in many of the Indian and some of the Malayan loan-words) they still appear as sonants in the written language. Conversely Cambojan pronounces some surds as sonants.

† Mr. Himly in his paper referred to below, throws out a hint that some such explanation is possible, but does not enlarge upon it.

them are found to occur again in some distant island dialect of the Malayan family.

I propose to give a few instances to show the forms which such words assume in Cambojan and Peguan, but before doing so, I may as well point out that Indian loan-words, as to the origin and derivation of which there can be no doubt, undergo a similar mutilation in the Southern Indo-Chinese languages so that an analysis of the changes exhibited by these Indian words will serve as a guide in identifying the Malayan words to be found in those languages, which are often hardly recognizable without some such help.

The following are examples of words of Indian origin common to Malay and these two languages: I give the Malay, rather than the Sanskrit form, because the former is more familiar to those who know Malay.

Malay.	*Cambojan.*	*Peguan.*
Kala	kāl	kāla.
Kĕchapi	chāpey [chapĕy]	——
Guru	grūw [Krû]	——
Chandra	chand [chăn]	——
Jambu	jåmbūw [chǒmpū	——
Dewata	dew-ta [tévoda] deb-ta [tépoda]	dewatan [tewătau].
Dosa	dōs [tôus]	duh [tuh].
Nagara	nagar [nokor]	——
Naga	nāg [néak]	nāk [naik].
Puasa	puos [buos]	——
Bangsa	wangs [vong] pangs [pong]	wang [weang] wongsa.
Muka	mukkh [mŭkh]	muk.
Raja	rāj [réach]	rājā [reachea].
Satwa	satw [săt]	sat [såt].
Sutra	sūt [sâut]	sut.

The following list shews some of the similar changes which Malayan words suffer, viz.

Malay.	*Cambojan.*	*Peguan.*
I. Suppression or weakening of the first syllable:—		
Kayu	jhĕć [chœ̂u]	chhu [tsu]
Kijang	k-tān [kĕdan]	——
Katup	k tāp [kĕdap]	——
Garam	krām [kram]	——
Jawa	jwā [chvéa]	——
Tarum	trå̆m [trŏm]	——
Pusat	phchĕt	——
Perak*	prāk [prăk]	——
Bĕsi*	——	Păsoa.
Sarong	srōm	——
II. Loss of initial consonant:—		
Chin chin	ânchién	kăchin.
Tĕbu	ainbau [âmpou]	bau.
Tabong	ainbang [ampong]	——
Daching	anjing [ânching]	——
III. Loss of first syllable:—		
Tumbok	pok [bok]	——
Abang	pōng [bōng]	——
Lĕtak	tāk [dăk]	——
Kĕring	rîng	——
Esok	sâêk	——

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*[Note] Achinese bĕsoi, "iron." It is perhaps worth noticing that the Cambojan word for *silver*, like the Peguan for *iron*, is Malayan, while the Cambojan for *iron*, viz., *tēk* [*dêk*] is common to it and Chinese. The Cambojan word for *gold* is *mas* [*méas*]; the same as the Malay *mas, ămas*; but this is believed to be of Indian origin. For *tin* the Peguans use the expression *păsoa dāk* [*păsoa daik*], literally "water iron," alluding presumably to the alluvial formations where tin ore is got by washing river sand, while the Cambojans call it *Samna pāhă̊ng* [*Sămnâ pahăng*], from which, as *samna* appears properly to mean "lead," I conjecture that the Cambojans first got their tin from Pahang, for the word *pāhă̊ng* does not seem to have any meaning in their language, so far as can be ascertained from the Dictionary. Similarly in some of the Western languages (e.g. Arabic and also Hindustani, I believe) tin is called by a name *al-kalaʿi* derived from Kālāh, a place on the Western shore of the Peninsula probably identical with Kĕdah.

IV. Loss of second syllable :—

Pĕchah	pek [bêk]	păkaw [păko].
Patah	Păk [bak]	puit [pat].
Buka	pêĕk [bôk]	påk.
Mata	——	mat [måt, mot].
Tanda	tān [dan]	——
Tolak	tol [dol]	——
Pakai	bāk [peak]	buik [puk].

The Cambojan and Peguan words have been transliterated, to the best of my ability, from the written languages: where the pronunciation is different, this is indicated by a second form in square brackets, following in the case of Cambojan, M. Aymonier's spelling and in the case of Peguan the indications given by Haswell, adapted to the ordinary modern system of romanization.

This list could be considerably lengthened, specially as regards Cambojan, if space permitted: but I think it is enough * to show that there is a field of research waiting for any Malay scholar who has a fancy for hunting up Malayan words in these languages. It would however be a great mistake to suppose that the bulk of the vocabulary of Peguan or Cambojan can be accounted for in this way: the contrary is the fact, and at first sight any Malay student looking through a dictionary of either of these tongues would be struck with their non-Malayan aspect. It is by neglecting the essential relationship which exists between Peguan and Cambojan † and ignoring the

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*In presenting a list which merely compares a few words in Peguan and Cambojan with what I believe to be the corresponding words in Malay, without taking into account the other Mon-Annam dialects and the other languages of the Malayan family, I am aware that I am offending against one of the primary canons of comparative philology. But my present object being to make out merely such a *prima facie* case as will justify further investigation in this direction, I have thought it superfluous to being in the corroborative evidence that can be supplied from the other languages. I hope some day to deal with this matter more fully and systematically.

† It will interest Straits readers to know that this was first noticed by our Straits authority, J. R. Logan. It has since been conclusively proved by Forbes in his "Languages of Further India."

wide differences in lexicographical material between the latter and the Malayan languages, that some authorities have been misled into denying the existence of a Mon-Annam family and asserting that Cambojan should be classified as a member of the Malayan group.

So far as it goes, this list of words serves to illustrate the subject of this paper by giving another instance of the traces of a Malayan influence in Indo-China, which must be of very ancient date, and which is obviously an important element to be considered in relation to the unsolved problem of the origin of the Malayan races.

Many considerations point to the conclusion that at least some part of the ancestry of those races* is of continental Asiatic origin: there are anthropological reasons, which I am unable to deal with, but which have been summed up roughly (and not very accurately) in the phrase "Mongoloid type;" ethnographical considerations, such as were dwelt upon by the late Sir Henry Yule † and others, specially a curious agreement between the races of the Archipelago and those of Indo-China in a considerable number of points of detail regarding customs and usages (a kind of evidence, which though very weak if depending merely on one or two points of agreement, is in its nature cumulative and gains strength in an increased ratio as additional points are discovered); and, finally, there is the linguistic evidence, the investigation of which is, however, involved in many preliminary difficulties. It is to be feared, for instance, that the late Mr. J. R. Logan's achievements in this direction are not a safe basis for further enquiries to start from. On the other hand Professor Kern,‡ by a comparison of a considerable number of names of plants, animals and the like, which run (more or less) through the whole range of Malayo-Polynesian languages from Madagascar to Hawaii and from Formosa to New Zealand, has shown that the speakers (whoever they were) of the mother tongue from which these innumerable languages were evolved, were a seafaring people, of some moderate degree of civilization, (they were acquainted with the use of iron), who at the stage preceding the differentiation of these languages (but not necessarily originally) inhabited a long coastline of some good-sized country situated within the tropics, somewhere in the western half of the vast region over which these languages now extend. He points to the South-Eastern coast of Indo-China as the country that fits in best with this conclusion; and without going into details, lays some stress on the considerable Malayan element that is to be found in the existing languages of that region, which fact, as he observes, in view of the relative unimportance of the small Malayan communities to be found there in modern times, can only be explained by the hypothesis that they formerly constituted a much more numerous and powerful factor there than they do in our own day.

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* I refer here more particularly to the true Malayan races inhabiting the western half of the Indian Archipelago, to whom alone the anthropological argument applies. How it is that the totally distinct stocks known as Papuan, Polynesian, Micronesian, etc., come to speak languages that cannot be severed from the Malayan family, is another problem, also at present awaiting solution. There seems, however, no doubt that it is the case, in spite of the difficulty of finding an explanation for it.

† Journal of the Anthropological Institute, 1880.

‡ In the paper to which a reference will be found below, the most conclusive, perhaps, of these words are the names for sugar-cane,

This last point it has been my endeavour to illustrate in the present paper.

It may be convenient if I summarize the conclusions to which the considerations here brought together appear to me to lead:—

(1) The Malayan element in Cham and its cognate dialects was not borrowed from any other Malayan language or group of languages. It has been separated from the western insular groups for as many centuries, as they have been from one another, and has become differentiated from them as they have amongst themselves.

(2) The Southern Mon-Annam languages and Cham are at once Malayan and non-Malayan: largely Malayan in structural formation, mixed but predominantly non-Malayan in vocabulary, they are probably the result of an intimate mixture between

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banana, rice (in husk and husked), shark, prawn, sea-turtle, buffalo and crocodile: but there are a good many more besides.

Malayan and alien tongues. The Malayan element is strongest in the southeast, weakening progressively towards the north and west.

(3) At a remote age, before the introduction of the alien element just referred to, probably the whole coast of southern Indo-China from the Irrawady to the borders of Tongking, and certainly the eastern part of it from Cape St. James to the neighbourhood of Hué, was more or less occupied by communities speaking a pure Malayan language, possibly already slightly differentiated into dialects.

(4) It was probably from this region at a time when it was still purely Malayan, that the various emigrations took place, which ultimately carried dialects of that language to the distant islands in which they are now spoken.

I am content to rest this last proposition on the grounds put forward by Professor Kern in the essay already referred to; the other three appear to me to follow, though not all with the same degree of certainty, from the linguistic evidence of which some specimens have here been brought together.

Since writing the above, I have seen in the T'oung Pao for March, 1901 (Series II, Vol. 2, No. 1, p. 86) a review by M. Gustave Schlegel of a recent Siamese grammar. In noticing this work (which appears to be the best Siamese grammar hitherto published) after pointing out, what has been pointed out before, notably by the late M. Terrien de la Couperie, that Siamese contains a very large percentage[*] of words common to it and Chinese (especially, the numerals[†] which are, up to a certain point, pure Chinese loan words) and also a considerable number of Sanskrit and other Indian words, the eminent Chinese Professor of Leyden hazards the view that the residuum of Siamese will be found to be a Malayan language, and supports this thesis by a few words which no doubt are Malayan but may very well be loan words like the Indian ones; everything that the venerable professor writes is worthy of consideration, but with all deference, I venture to say that this is indeed a bold theory. His chief argument, apparently, apart from the aforesaid Malay loan wards, is that Fu-nan (or Pu-nam), the old name for the country now called Siam, is capable of being explained by a Siamese derivation which M. Schlegel invents for it: unfortunately all monosyllabic languages lend themselves only too easily to hypothetical derivations of that kind; and that its people, in the early centuries of the Christian era, are described by Chinese chroniclers as being "ugly and black" with "curled hair," resembling, the Professor himself says, the Semangs. On the strength of this he assumes the Siamese to be Malayan. Everyone who has been to the Far East should know, and M. Schlegel can hardly have forgotten, that the Siamese are several shades fairer and the Semangs several shades darker than the average Malay complexion: and that neither Siamese nor Malays have curled or curly hair. His argument compels M. Schlegel to deny the historically certain fact that the Thai, that is the present Siamese, are comparatively recent arrivals from the interior of Northern Indo-China; and he entirely overlooks the essential unity of their language with that of the Laos, Shans, etc., right away to the Khamti on the eastern border of Assam and a string of tribes in southwestern China. If the Siamese spoken to-day at Bangkok is at bottom a Malayan language, so must be the languages of all these northern tribes, for they are substantially the same and cannot be severed from one another. That appears to me to be an exceedingly large conclusion to draw from a few Malay loan words to be found in modern Siamese, and I am convinced that it will be repudiated both by Siamese and Malay Scholars with tolerable unanimity.

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[*] De la Couperie puts it as high as 33⅓ per cent: "Languages of China before the Chinese" pp. 59-60.

[†] Not however, "one" and "two."

Of course the possibility that there is a Malayan element in the blood of the modern Siamese of the South is not thereby excluded: that there should be such an element is an almost necessary consequence if the main argument of the foregoing paper has anything in it. But apart from modern intermixture which the difference of religions keeps at a minimum, it can only have come in at second hand through the Peguan or Cambojan inhabitants who occupied Siam before the Thai conquered it. That, however, is a very different matter from the hazardous assertion that Siamese is a Malayan language, an assertion which requires far more cogent evidence to justify it than M. Schlegel has supplied in the article to which I refer.

It is hardly necessary for me to add that this paper is merely intended to draw the attention of the readers of this Journal to the subject; so far as the greater part of it is concerned, no claim is made for originality, and it is in the main merely a restatement of what has been set forth elsewhere in fuller form by others. My excuse for offering it to the Society is that some of the readers of this Journal may not have had access to the existing literature on the subject. At the risk of appearing egotistical, I desire to put on record that at the time my former paper was published, I had not heard of Professor Kuhn's admirable essay entitled "Beiträge Zur Sprachen Kunde Hinterindiens." In it most of my conclusions were anticipated, and, if I had known of its existence, my paper would not have appeared, without at least some reference to it. The occasion for this personal explanation, which ought perhaps to have been made sooner, is a remark by Dr. Luering in No. 35 of this Journal.

I append a list of the principal authorities consulted:—

AYMONIER, Grammaire de la langue Chame; Les Tchames et leurs Religions (Revue de l'Histoire des Religions, 1891); The History of Tchampa (Imperial and Asiatic Quarterly Review, July 1893, and Transactions of the Ninth Congress of Orientalists, London, 1893); Vocabulaire Cambodgien-Français; Dictionnaire Khmêr-Français;

VAN LANGEN, Atjehsche Taal (Handleiding; Woordenboek);

HASWELL, Grammatical Notes and Vocabulary of the Peguan Language;

STEVENS, Vocabulary of English and Peguan;

KERN, De Fidjitaal; Taalkundige gegevens ter bepaling van het Stamland der Maleisch-Polynesische Volken (Verslagen en Mededeelingen der Koniklijken Akademie van Wetenschappen, Afd. Letterkunde, Amsterdam, 1889).

MOURA, Le Royaume du Cambodge;

ANDERSON, The Selungs of the Mergui Archipelago;

KUHN, Beiträge zur Sprachenkunde Hinterindiens (Sitzungsberichte der Philosophisch-, Philologisch- und Historischen classe der Königlichen Akademie der Wissenschaften; Munich, 1889);

HIMBY, Bemerkungen über die Wortbildung des Mon (*ibid*); Ueber den Wörterschatz der Tscham-Sprache (*ibid.*), 1890.

NIEMANN, Bijdrage tot de Kennis van der Verhouding van het Tjam tot de Talen van Indonesie (Bijdragen tot de Taal-, Landen Volkenkunde van Nederlandsch Indie, Leyden, 1891.)

BRANDES, Bijdrage tot de Vergelijkende Klankleer der Westersche Afdeeling van de Maleisch-Polynesische Taalfamilie.

VAN DER TUUK, Outlines of a Grammar of the Malagasy Language (Reprinted, from the Journal of the Royal Asiatic Society, in Vol. I of the Second Series of Essays Relating to Indo-China, for the Straits Branch).

A Vocabulary of the Jakuns of Batu Pahat, Johore, together with some remarks on their customs and peculiarities.

BY A. D. MACHADO.

At the headwaters of the Sembrong, the Bekok and the Simpang Kiri in the interior of Johore, three large streams which, draining one into the other, form lower down the Batu Pahat River, are to be found scattered families of Jakuns. These people live by agriculture, are employed by the Chinese pepper and gambier cultivators in clearing jungle for them, and furnish the Malays through barter, their stock of jungle produce. Years of contact with the Chinaman have robbed them of much of their primitiveness. So great is their assimilation to the Chinaman, that when cadging a bowlful of rice from him, they have been often seen manipulating a pair of chopsticks with a dexterity unequalled by the Chinaman himself. They now profess an abhorrence for monkeys, snakes, lizards and similar delicacies, and it is sometimes amusing to behold their studied look of consternation at any one suggesting the possibility of anything so loathsome forming part of their daily menu. Yet the Malays declare that in the privacy of their own homes, they will devour anything, from a snail to an elephant. They do not regard with disfavour the giving of their daughters in marriage to Chinese planters, such unions usually assuring to them and their relations some measure of certainty of a regular supply of food. They are thus a somewhat mixed people to-day. In general appearance they are not unlike up-country Malays. There is still however that peculiar lustre in their eyes, an appearance of independence and yet of timidity, an indefinable something in fact, which to a practiced observer, at once proclaims them their primitive origin and their probable connexion with the other wild tribes further north in the peninsula. They do not call themselves Jakuns, that word being a term of opprobrium if applied to them within their hearing. Curiously enough, the Sakais also resent the application of the word Sakai to them, and like the Sakais again, they call themselves *Orang Ulu*, up-country people. The Malays in their dealings with the Jakuns, call them *Pa angkat* (adopted father) *Ma angkat* (adopted mother) *adik angkat* (adopted younger brother) and so on as the case may be. This pleases them hugely, though not to the extent of inducing them to part with their stock any cheaper or in greater quantity. For all that, they are very much harrassed and robbed by the Malays, in particular by those who have some authority over them. In my journeys into the interior of Batu Pahat, I have often had patiently to listen to the complaints of these men against their Malay oppressors, many of undoubted genuineness, without however having the power to render any relief.

It may not perhaps be generally known that the Jakuns practice the rite of circumcision, but in a way peculiar to themselves. They do not, like the Mohammedans, remove the whole skin, but merely part the upper folds of the prepuce by a longitudinal cut or incision, causing the rest to drop into a bunch below. Asked as to the reason for this peculiar rite, the oldest man present related to me the following legend. Very many years ago, when the whole country belonged to them and they were under the rule of a great Batin (King of their own, as great as the Sultan of Johore,) this great Batin had a wife who for a long time remained childless. At length, a male child was born to them, who after thriving for some time sickened and was on the point of death. On consulting a *Pawang* (Diviner or Sorcerer) who happened in this case to have been a Mohammedan Malay, he declared that the only means of saving the youth's life was by circumscision. To this the great Batin demurred but vowed that if his child recovered, he would be circumscised. He got well and the operation was in due time performed but in order that he might not thereby be held to have embraced the Mohammedan faith, this peculiar style was adopted, the fiat having in the meantime gone forth that all male Jakun children were in future to undergo this operation in the manner indicated above, which explains the existence of this peculiar custom to-day. This custom is utterly unknown to the northern Sakais who appear to dread the operation, so much so that many Pahang Sakais have told me that but for this one operation, they would have embraced the Mohammedan faith. Another reason why a Sakai will not become a Mohammedan is that he will be obliged to eschew such delicacies as he from time to time picks up in the jungle, in particular the bamboo rat (*Rhizoneys*) which is to him the most toothsome and delicate of foods!

These Batu Pahat Jakuns told me that in days of old, they possessed a very extensive vocabulary of their own. All that now remains of this once extensive vocabulary are a few words, which they still use interspersed with Malay and which are transcribed below. Even these few remaining words, the rising generation of Jakuns do not appear inclined to use, so that in a short time, their once extensive language will be a thing of the past. I should add that a great number of these words have appeared in one of the earlier issues of the Journal collected by Lieut. Kelsall, R. E., from the Endau Jakuns, while a few seem peculiar to the Batu Pahat people.

List of Jakun Words at present in use among the Jakuns of Batu Pahat.

Now, klak.
Day after to morrow, duâk'.
Morning, lom. ("Lom" in Siamese means air.)
Thunder, pâtēh. ("Patēh" is "Slave" in Malay.)
Lightning, gintal.
Tiger, jerokee.
You, atok, hee. (Heh is Sakai for you.)
Boy, kôlôp. (In Perak "kulup" also means boy among Malays, while in Pahang, the same word means, among Pahang Malays, male organ of generation.)
Girl, dai-ying (Siamese for woman is Pu ying)
Father, bai.
Aunt, amai.
Uncle, wâh.
Unmarried man, penganting.
" girl, dai-ang.

Cheek, pïpï.
Chin, dago.
Forehead, kening.
Eyebrow, bulu halis.
Widower, balu.
Widow, indong balu.
Divorced man, silai.
Divorced woman, indong silai.
Cold, sidêk.
Father of first born child, p'miot.
Mother ,, ,, ,, ,, indong miot.
Porcupine, sebuntu.
Gibbon, tawók.
Dog, koyok.
Durian fruit (*Durio Zibechinus* L.), tuang
Tampui (*Baccaurea Malayana*), berket.
Papaya (*Carica Papaya*), kuntaia.
Sweet potato, tilak.
Don't know, bê-nâ-hûk.
Finished, bek.
Man, b'orang.
Woman, oyang.
Father of dead child, mantai.
Mother ,, ,, ,, indong mantai.
Want, endák.
Don't want, n'gnin.
To procreate, m'nuju.
Female organ, kache.
Drink, jo·ho.
Thirst, chekat.
Tired, kâbo.
Head of father or mother-in-law, hombubu.
Forehead, k'ning.
Heel, tumbit.
Mouth, bibir.
Jungle, debrî.
Ant, m'ret.
Elephant, pechem
Mosquito, rêngit.

Pig, jokot.
Rhinoceros, s'nkrat.
Come, kiah.
Friend, teman.
Knee, to-ut.
Frog, bihong, or chikong or B'bap.
To kill, kleng.
Weak, beh rot or beh alah.
Firestick, lârâk,
Firewood, Ungun api or chel-hér.
Not got, póhôs
Rainbow, bohuta or kawat.
Blow pipe, temiang. (Temiang is Malay for that particular species of bamboo from which Blow Pipes are made, the *Bamboosa Wrayï.*)
River bank, t'rbis.
Angry, t'keng.
No, bêh.
Go, jôk.
Spider, t'wowoh.
Woodpecker, t'rlom.
Leprosy, p'ngundim or barak.
Korap, (a kind of ringworm common among all jungle men, likewise among Malays and Siamese who dwell in the interior) Losonq.

On the Parthenogenetic Breeding of EURYCNEMA HERCULANEA, Charpentier.

BY R. HANITSCH, PH. D.,

CURATOR OF THE RAFFLES MUSEUM, SINGAPORE.

Although I have already given some account of the breeding of the huge Phasmid insect, since identified as *Eurycnema herculanea*, Charpentier, in the Annual Reports of the Raffles Library and Museum for 1897 and 1898, it seems desirable to put it on record in a more connected form.

About January 1897 Mr. L. A. Fernandis, Taxidermist in the Raffles Museum, received a living female of this species, but as it had passed through several hands, its place of origin could not be traced. Possibly it may have come from Java. He kept it alive, feeding it on guava leaves (*Pisidium guyava*, L.), and in February it began to lay eggs. He kindly presented me with a number of those eggs, most of which hatched during April and May of that year, but one not till August, and the last one in the middle of September. As soon as the young ones were hatched, they applied themselves very vigorously to the consumption of guava leaves, and grew so quickly that the first one out was fully developed on August 11th, casting its last skin on that date, i. e., more than a month before its last sister egg was hatched. During growth they cast off their skin several times without any great effort, only rarely losing a leg in the process, until the last cast, when many of them lost several legs, one even as many as five. Naturally these were then helpless in feeding themselves, not being able to cling on to the guava leaves, and they soon died. But the individuals which were successful afforded an interesting sight when the last skin was cast. Up to this they had been stick-like in appearance (Malay name "Bilalang Ranting," Stick Insect), without wings, of dark brown colour in the earlier stages and turning into grey in the later stages. Now they suddenly appeared in a glistening new green skin, with long wings, and the body seemingly almost double its former diameter. All specimens were female, and a few weeks after they had reached the adult stage, they began to swell up and lay eggs, the first of them being laid on September 16th. None of the females had ever come into contact with a male insect, having been carefully kept in a large airy case consisting of glass and perforated zinc, exhibited in the entrance hall of the Raffles Museum. Eggs were continually being laid by the sister insects up to February 1898, the insects dying about two or three weeks after they had deposited the eggs. Of the eggs laid during the last four months of 1897 and the first two months of 1898, a careful account was kept. Every morning I inspected the case, removed the eggs which had been laid during the past twenty-four hours, and placed the eggs laid on different days in separate boxes, duly dated. The first young ones of this generation appeared in March and the last in August, requiring for their development from 165 to more than 240 days of which great divergence in time I cannot give any explanation. Most of them, however, were hatched between the 195th and 212th days, the maximum number being hatched on the 205th day. The accompanying table shows the proportions of eggs hatched on different days. This generation was rather weakly, only a few reached maturity, most of them dying off when shedding their skin two or three stages before maturity. The first of them reached the adult stage on August 10th, 1898, and never having come into contact with any male, began to lay eggs on September 15th. These eggs did not develop, and none of the other individuals of this generation laid any eggs.

The reason why the eggs of the last generation did not develop was very probably in consequence of their artificial surroundings. If I had been able to keep the insects in more natural conditions and to devote more care to their feeding, I feel sure I would have been able to rear a few more parthenogenetic generations.

This appears to be the first instance of Parthenogenesis observed amongst Orthoptera, and there are now only three orders of insects left in which this mode of propagation has not yet been described, viz., Coleoptera, Strepsiptera, and Aptera. In Hymenoptera Parthenogenesis occurs amongst the Tenthredinidæ or Saw Flies, Cynipidæ or Gall Flies, Chalcididæ, and certain Bees and Wasps. Amongst Lepidoptera there is perhaps only the one well-established case of *Solenobia*, and amongst Diptera that of *Chironomus*, amongst Thysanoptera the case of *Thrips*, and amongst Neuroptera a doubtful case of one of the Caddis Flies, *Apatania*. More common again are well-established cases of Parthenogenesis amongst Hemiptera, viz., in the Aphidæ or Plant-Lice, and Coccidæ or Scale Insects.

Description of the adult female: The total length of the largest specimen, preserved dry, is 230 mm. (about 9 inches), but all the measurements given below are taken from a very perfect specimen preserved in spirit, measuring 204 mm. (about 8 inches), the total length in both cases being exclusive of the antennæ, but inclusive of the ovipositor.

The head is oval and smooth, 13 mm. long, with three very distinct ocelli, the antennæ being 27 mm. in length and consisting of 26 joints. The prothorax is corrugated, without spines, and only 11 mm. in length. The mesothorax is 39 mm. long and spined. On its dorsal surface there are about sixteen spines arranged in two irregular rows of eight each, laterally about eight spines on either side, and ventrally two irregular rows of about six spines each. The metathorax, 16 mm. long, is smooth dorsally, but provided with a few blunt spines laterally and ventrally.

All the abdominal segments are smooth. The first segment measures 12 mm., the second, third, fourth and fifth 14 mm. each, the sixth 15 mm., the seventh 13 mm., the eighth 10 mm., the ninth and tenth 7 mm. each. The ovipositor is large and boat shaped, measuring 39 mm. and projecting beyond the last segment by 19 mm. The styles are 12 mm. long: they are narrow flat plates with a dorsal vertical ridge, appearing therefore ⊥ shaped in transverse section.

The first pair of legs measures 112 mm., the second 90 mm., the third 122 mm. The femora of all legs bear spines arranged in three rows, but the tibiæ of the first pair of legs are almost smooth, whilst those of the second pair are more spiny and those of the last pair still more so. The animal has the power of reproducing legs lost during the process of casting of the skin, especially in the earlier stages, but in my specimens the new legs never grew up to the size of the normal legs of the opposite side.

The wing covers measure 39 mm., the wings themselves 77 mm., reaching down to the end of the fifth segment.

The eggs are oval and smooth, of dark brown colour, measuring 5 by 4 mm., surmounted by an almost spherical capitulum, 1.5 mm. in diameter. These eggs were figured by Dr. D. Sharp, F. R. S., of Cambridge, in his "Account of the Phasmidæ, with Notes on the Eggs," in Willey's "Zoological Results," part IX, fig. 39, under the name of *Cyphocrania hanitschi*, n.n., and the author says that they are remarkable for the large size of the capitulum. Later on, however, he identified the species as *Eurycnema herculanea*, Charpentier.

Tabl enetic eggs of

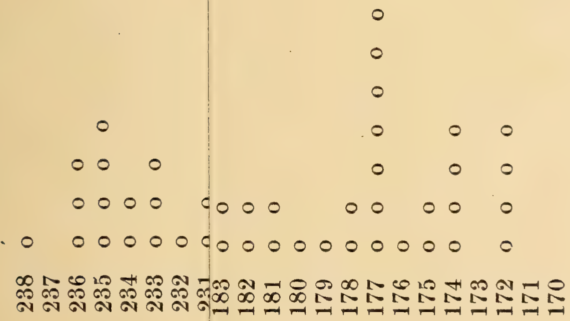
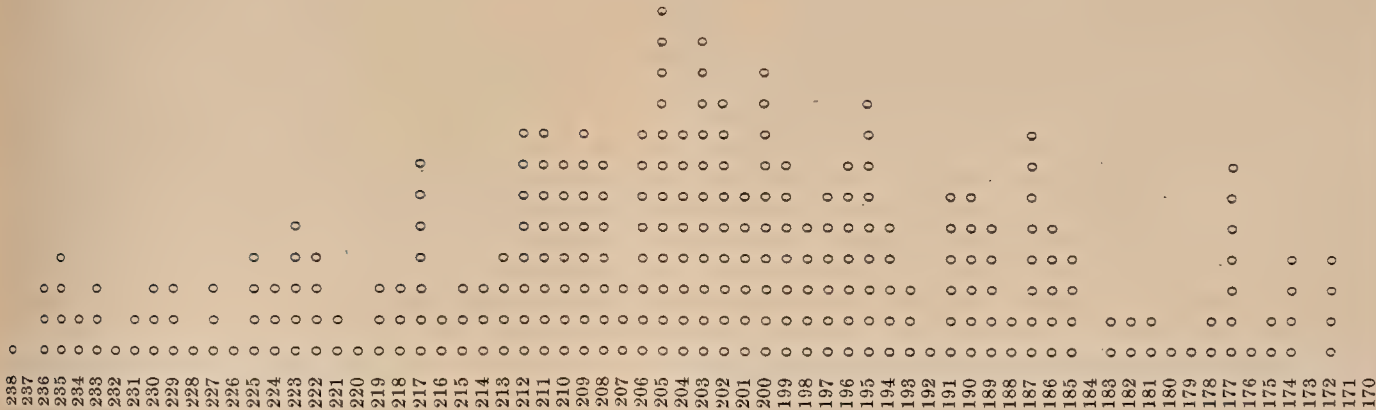


Table shewing the time required—in days—for the hatching of the parthenogenetic eggs of EURYCNEMA HERCULANEA, Charpentier.

The circles indicate the number of eggs hatched on the respective days.



Malay Plant Names.

By H. N. Ridley and C. Curtis.

In Journal No. 30 a list was published of Malay names of plants with their equivalents in Latin and English. It has been considered by various persons that it would be useful to have the names in Latin-Malay, and Mr. Curtis has compiled this from the original work. This also gives an opportunity of adding names since obtained, and of making various corrections in identification and spelling. Dr. Clercq, who is much interested in this study of native plant names, has criticised the original list, and added a number of names and suggestions, which are incorporated herewith. One or two words have been added from Clifford and Swettenham's Dictionary, but many of the plant names therein are unidentified with the plants, and so useless for this purpose, and some are not Malay Peninsula words, to which this list has been confined.

Scientific Names.	*Malay Names.*
Abrus precatorius, L. (*Leguminosæ*).	Akar belimbing. Akar saga betina.
Abutilon indicum, L. (*Malvaceæ*).	Kambong lobo. Bunga kisar. Malbar.
Acacia pseudo intsia, Willd. (*Leguminosæ*).	Akar kapok. Kayap.
,, pennata, Willd. (Var pluricapitata).	Akar kayu manis.
,, Farnesiana, Willd.	Lasana.
Acalypha indica. (*Urticaceæ*).	Rumput lis-lis.
Acanthus ebracteatus, Wall. (*Acanthaceæ*).	Jeruju. Jerujah. Gurujuh laut.
Acorus calamus, L. (*Aroideæ*).	Jeringu. Deringu.

Acriopsis javanica, Reinw. (*Orchideæ*).	Sakat bawang. Sakat batu kapiam.
Achras Sapota, L. (*Sapotaceæ*).	Chiku.
Acrostichum aureum, L. (*Filices*).	Larat.
Acronychia Porteri, Wall. (*Rutaceæ*).	Katiak. Bimau hutan. Melaman.
A. laurifolia, Bl.	Gambadak. Rejang.
Actinodaphne sp. (*Laurineæ*).	Medang kuning. M. kunyit.
Actinorrhytis Calapparia. (*Palmæ*).	Pinang Sendawa. P. hantu. P. Penawar.
Adenosma coeruleum, Br. (*Scrophularineæ*).	Magun jantan. Bapulut. Gumbok. Timbah tasek. Tasek-tasek.
„ capitatum, Benth.	Tasek-tasek. Ruku hitam. Talan. Kuching-kuching.
Adenostemma viscosa, Forst. (*Compositæ*).	Rumput pasir. Sumbong gajah.
Adenanthera pavonina, L. (*Leguminosæ*).	Saga. Kanduri batang.
Adenosacme longifolia, Wall. (*Rubiaceæ*).	Nasi-nasi bukit.
Adina rubescens, Hemsl. (*Rubiaceæ*).	Murombong. Peropong. Berubong.
Adinandra dumosa, Jack. (*Ternstrœmiaceæ*).	Poko gula. Tiup-tiup. Medang petutu. Medang api-api.
„ sp.	Tubo.
„ sp.	Mungol.
Aegiceras majus, Gaertn. (*Myrsineæ*).	Teruntum. Kukulang Laut.
Aeschynanthus radicans, Jack. (*Gesneriaceæ*).	Akar Rambeh daun. Akar berunus.
Aegle Marmelos. (*Rutaceæ*).	Bila.

Aganosma marginata, Don. (*Apocynaceæ*).	Sakat limah. (Pahang).
Ageratum conyzoides, L. (*Compositæ*).	Tahi ayam. Tombok-tombok jantan. Sianggit.
Aglaonema angustifolium, N. E. Br. (*Aroideæ*)	Sumpuh bulan. Sumpuh kring. Penggehé sagut.
,, marantifolium, Schott.	Birah ayer.
,, minus, Hk. f.	Mata hudang. Salimpat Ayer. Senjuang hutan. Mata Bisol.
,, oblongifolium, Schott.	Lidah gajah.
Aglaia argentea, King. (*Meliaceæ*).	Modu.
,, Griffithii, Kurz.	Balun hijau.
,, odorata, Lour.	Belangkas. Chulan.
,, odoratissima, Bl.	Sulubat jantan. Tumilang. Belangkas hutan. Rambutan Pachat Jantan.
,, glabriflora, Hiern.	Pasak bras-bras. Mulupas. Pasak Linga, Pasak Merah.
,, Tenuicaulis, Hiern.	Kasip bukit.
,, Diepenhorstii.	Tada Ikan.
Ageloea vestita, Wall.	Kaching-kaching. Kang-kuchang. Akar rusarusa. Telor bujak.
Agrostistachys longifolia, Benth. (*Euphorbiaceæ*)	Julong-julong.
Agrostophyllum glumaceum, Hk. f. (*Orchideæ*).	Bunga sakat.
Alchornea villosa, Muell. (*Euphorbiaceæ*).	Rambahan bukit. Rami hutan. Rami bukit.
Aleurites moluccana, L. (*Euphorbiaceæ*).	Kamiri. Buah keras.
Alocasia longiloba, Miq. (*Aroideæ*).	Keladi rimau. Keladi ular.
,, macrorhiza, Schott.	Keladi sebaring. Keladi. Birah negri.

Allomorphia exigua, Bl. (*Melastomaceæ*).	Pakan rimbau. Senduduk gajah. Senduduk hutan. Panghong. Kerakup rimau. Kaduduk gajah. Endebi.
,, Griffithii, Hk. f.	Kapo-kapo. Kurukap rimau. Tutup bumi rimbah.
Allophyllus cobbe, L. (*Sapindaceæ*).	Terentang bukit. Tumbit kayu.
Aloe ferox, Haw. (*Liliaceæ*).	Lidah buaya.
Alpinia conchigera, Griff. (*Scitamineæ*)	Lengkuas ranting. Kelamoyiang. Jurunang.
,, involucrata, Griff.	Kantan hutan. Puah putih. Gingin.
,, galanga, L.	Lengkwas. Murawang.
,, Rafflesiana, Wall.	Pua mengkuang. Tepus kijoi.
Alstonia scholaris, Br. (*Apocynaceæ*).	Getah pulai. Pulai. Rejang.
,, macrophylla, Wall.	Medang tai kerbau. Buta-buta darat. Tembusu paya. Chendai petri. Buburas.
,, spathulata, Bl.	Rajana.
Allium cepa, L. (*Liliaceæ*).	Bramban.
Alsodeia echinocarpa, Korth. (*Violaceæ*).	Aho-lumut. Juta-juta. Lalada. Lelada. Sibilek. Segumpa betina. Medang terutau.
,, Kunstleriana, King.	Sigoh. Marajan minko. Sigoniah.
,, membranacea, King.	Melor angin.
,, lanceolata, Wall.	Ina kechil.
Alternanthera sessilis, Br. (*Amaranthaceæ*).	Akar rumput. Kelama hijau. Bayam pasir. Bayam tana. Kerak-kerak paya. Kerumak bukit paya.
Alseodaphne semicarpifolia, Hk. f. (*Laurineæ*).	Medang lebar daun.

Alseodaphne umbelliflora, Hk. f.	Medang ketanahan. M. loso Belangkas hutan.
Alyxia stellata, Roem. (*Apocynaceæ*).	Ampalas hari. Milor.
,, lucida, Wall.	Ampalas hari. Mempelas Hari. Pulasari.
,, pilosa. Hook. fil.	Ampalas wangi.
Amaranthus caudatus, L. (*Amaranthaceæ*).	Bayam selaseh.
,, gangeticus, L.	Bayam merah.
,, retroflexus, L.	Bayam duri.
,, viridis, L.	Bayam monyet. Bayam putih.
,, spinosus, L.	Bayam duri.
,, spp.	Bayam.
Ampelocissus sp. (*Ampelideæ*).	Akar chabang tujoh.
,, cinnamomea.	Akar puding rimbah.
Amorphophallus variabilis Bl. (*Aroideæ*).	Kumbang brankie.
,, prainiana, Hook. f.	Likir Likir ular.
Amygdalus persicus (*Rosaceæ*).	Kenari wolanda.
Anadendron montanum, Schott. (*Aroideæ*).	Akar asam tebing darat. Akar tebing agu. Akar Murian sumbong. Sugunja. A. chabai hutan.
A. latifolium, Hook. fil.	Akar surundang.
Anacardium occidentale, L. (*Anacardiaceæ*).	Gajus. Jambu monyet. Kaju.
Anaxagorea Scortechinii, King. (*Anonaceæ*).	Pali monyet.
Ananasa sativa, L. (*Bromeliaceæ*).	Nanas.
Ancistrocladus penangianus, Wall. (*Dipterocarpeæ*).	Akar Julong hitam.
Aneilema nudiflora, Br (*Commelinaceæ*).	Rumput Tapak burong. R. Lidah lumbu. R. Kurunit. R. Sarang tupai.

Anaectochilus Reinwardtii, Bl. (*Orchideæ*).	Bunga tulis.
Anisoptera Curtisii, King. (*Dipterocarpeæ*).	Rengkong
,, glabra, King.	Mersawah merah.
,, costata, Korth.	Mersawah ular.
Anona muricata, L. (*Anonaceæ*).	Srikaya blanda. Nona blanda (Sour sop).
,, reticulata, L.	Nona kapri. (Bullock-heart)
,, squamosa, L.	Nona. Sri kayu. (Custard-apple).
Anplectrum glaucum, Triana (*Melastomaceæ*).	Akar dumah bukit. Akar seduduk. Sendudok Rimbah.
,, divaricatum, Triana	Akar kamunting. Kamunting bukit. Chambai hantu (Malacca).
,, polyanthum, Clarke	Akar jambah surai.
Anisophylleia disticha, Hk. f. (*Rhizophoreæ*).	Kanchil.
,, apetala, Scort.	Dalik limau manis. Medang burunit.
,, Griffithii, Oliv.	Kumpas dadeh.
Andropogon intermedius, Bl. (*Gramineæ*).	Rumput pijit.
,, muricatus, L.	Akar wangi. Kus-kus.
,, schoenanthus, L.	Serey.
Antrophyum reticulatum (*Filiceæ*).	Salimpar.
Anthistiria arguens, Willd. (*Gramineæ*)	Rumput sarang pipit.
,, gigantea, Cav.	Rumput riang-riang.
Anisogonium esculentum, Presl. (*Filices*).	Paku benar. Paku tanjong.
Antidesma alatum, Hk. f. (*Euphorbiaceæ*).	Peruan hitam. Berunai Barek.
, bunias, Muell.	Bras-bras hitam. Lundo. Mata punai. Buni. Buneh.

Antidesma cuspidatum, Muell	Gami. Gamo. Kenidei punai. Nah sepat. Pataling pagu. P. tugo. Mugagon.
,, fallax, Muell.	Gunchian gajah.
,, Ghaesembilla, Gaert.	Gunchak. Kasumba, Balong ayam.
,, microcalyx, Hk. f.	Bras-bras merah.
,, leucocladon, Hk. f.	Barek. Sakellet.
,, Moritzii, Muell.	Geruseh putih.
,, salicifolius.	Wampanu (Johor).
,, velutinum, Bl.	Berubah rimba. Lupong jantan. Guche gajah. Mempunai bukit.
,, sp.	Jantan tioh. Sutapoh Bukit.
Aporosa aurea, Hk. f. (*Euphorbiaceæ*).	Gading betina. Mubagon. Mumbong. Sebasah hitam. Rambai chuchut. Tambon chuchut. Sebasah minyak. Sebasah nipis kulit. Gading Betina.
,, Benthamiana, Hk. f.	Kasai. Marabuloh. Kelempeti.
,, Maingayi, Hk. f.	Tampoi pachat. Agas-agas. Sulumsui. Lampai.
,, ficifolia Baill.	Pulin Bukit. Sebasah jantan. Pulangga Paya. Nipis kulit betina. Bras-bras.
,, microcalyx, Hk.	Buburas padi. Jujamo. Pelangi. Bras-bras merah.
,, microsphæra, Hk. f.	Sukam merah.
,, nervosa, Hk. f.	Jinjenta.
,, nigricans, Hk. f.	Banuan.
,, Prainiana, Hk. f.	Bras-bras hutan. Petaling tandok. Chamantong gagah. Sutapoh. Masekam Putih.
,, stellifera, Hk. f.	Damak-damak paya. Nipis kulit putih.

Aporosa ficifolia, Hk. f.	...	Pulangga paya. Sebasah jantan.
Apostasia nuda, Wall. .. (*Orchideæ*).	...	Kenching pelandok. Pulumpas budak.
Aphania paucijuga, King. (*Sapindaceæ*).	...	Kelat julong putih. Kelat tulong. Mumjilai.
Aquilaria hirta, Ridl. ...	...	Chandan.
Aquilaria malaccense. ... (*Thymeleaceæ*).	...	Gaharu. Karas. Karas gaharu. Tui karas. Kalambak.
Aralia Thomsonii, Seem. (*Araliaceæ*).	...	Dulang-dulang.
Arachis hypogæa, L. ... (*Leguminoæ*).	...	Kachang China. K. Goreng. K. Tanah.
Aralidium pinnatifidum, Miq. ... (*Araliaceæ*).		Selubat. Tampong tulong. Balai. Tingal balai. Sabalat. Lempeda buaya.
Archytea Vahlii, Choisy. (*Ternstræmiaceæ*).	...	Riang-riang.
Ardisia colorata, Roxb. (*Myrsineæ*) ,,	...	Mantua pelandok. Nauli-nauli. Munsial. Marabuloh. Mumboloh. Jerok putih. Mantulong. Maranting.
,, crenata, Roxb. ...	...	Mata pelandok. Lingguni.
,, humilis, Vahl.	...	Lutus.
,, lanceolata, Roxb.	...	Sembaring. Murambong.
,, odontophylla, Wall.	...	Sumpuh lumpo. Pasal.
,, oxyphylla, Clarke.	...	Bujong samalam bukit. Tumuras. Chato.
,, villosa, Roxb.	...	Mata pelandok gajah. Salunta orang tinggi. Se-goreh.
,, sp.		Munijau.
Areca catechu, L. ... (*Palmæ*)	...	Pinang, Kachu.
Arenga Westerhouti, Griff. (*Palmæ*).	...	Langkup.
,, saccharifera, L.	...	Kabung. Enau.
Aristolochia Roxburghiana, Bl. (*Aristolochiaceæ*).		Akar ara. Ketola hutan.

Artocarpus incisa, L. (*Urticaceæ*).	Sukun. Kulur. Kelur.
,, integrifolia, L.	Nangka.
,, Gomeziana, Wall.	Tampang. Tampang tulong Tampang nasi. Tampang burong. Tampan - bulat.
,, Lakoocha, Roxb.	Tampang manis. Tampang ambon.
,, lancifolius, Rox.	Nangka pipit. Keledang
,, Kunstleri, King.	Getah terap.
,, Lowii, King.	Miku.
,, rigidus, Bl.	Tampuneh. Monkey jack.
,, Maingayi, King.	Champedak ayer.
,, polyphema, Persoon.	Champedak. Bongkong (Perak).
,, n. sp.	Tukul.
Artemisia vulgaris, L. (*Compositæ*).	Baru china.
Artanema sesamoides, Wall.	Kelulut gajah. Seluang mudik. Sesawi pasir.
Argostemma elatostemma, Hk. f. (*Rubiaceæ*).	Sumpuh kring.
Arthrophyllum diversifolium, Bl. (*Araliaceæ*).	Mempunai bukit. Jolok hantu. Segan bedahan. Apuil. Bedahan jantan.
,, pinnatum, Clarke.	Minta anak.
Arytera littoralis, Miq. (*Sapindaceæ*),	Kalintek Jamuk. Kulalayo hitam.
Asparagus officinalis, B. (*Liliaceæ*).	Separu kras.
Aspidium lenzianum, Hk. f. (*Filices*).	Paku gading.
,, polymorphum, Wall.	P. kikir.
,, cicutarium, Sw.	P. tembaga.
,, Singaporianum	P. murak. Biawak. Meroyan papan.
Asclepias curassavica, L. (*Asclepiadeæ*).	Bunga mas. Malukut paya.

Asystasia intrusa, Bl. (*Acanthaceæ*).	Pengurak.
Aspidopterys concava, Juss. (*Malpighiaceæ*)	Sedapat. Sampo paya.
Atalantia monophylla, De C. (*Rutaceæ*).	Empenai (Pahang).
,, Roxburghiana, Hk. f.	Limau pagar.
Averrhoa bilimbi, L. (*Geraniaceæ*).	Belimbing.
,, carambola, L.	Belimbing carambola, manis. B. batu.
Avicennia officinalis, L. (*Verbenaceæ*).	Api-api.
Baccaurea brevipes, Hk. f. (*Euphorbiaceæ*).	Karaes (Selangor) Poko mawas. Mata Ayam. Rambai Bukit. R. Ayam Rantau. R. Hutan. Tajam Moleh. Setambun Lilin.
B. bracteata, Muell.	Tampoi K'ra.
B. Kunstleri, Hook. f.	Rambai hutan.
B. macrophylla, Hk. f.	Tampoi Tunga. T. Tungnau.
B. malayana, Hk. f.	Tampoi.
B. Motleyana, Hk. f.	Rambai. Rambeh.
polyneura, Hook. f.	Ginteh merah.
B. parviflora, Muell.	Rambai Hutan. Setambun.
B. symplocoides, Hk. f.	Kumpa Manang.
B. Wallichii, Hk. f.	Rambai Hutan. Setambun Betina. Ginteh Merah. Lolai paya.
Bæckea frutescens, L. (*Myrtaceæ*).	Daun Chuchor Atap.
Bambusa Blumeana, Sch. (*Gramineæ*).	Buluh Duri. The spiny bamboo.
B. nana, Roxb.	Buluh China. B. Perindi. (Wray).
B. Ridleyi, Gamble	Akar Buluh.
B. Tuldoides, Munro	Buluh Balai
B. vulgaris, var.	Aur Gading. Buluh Pan (Wray).

B. Wrayii, Stapf.	Buluh Bersumpitan. B. Temiang.
Balanocarpus anomala, King (*Dipterocarpeæ*).	Malaut
B. penangianus, King.	Damar Hitam.
B. maximus, King.	Chengai. Chengal. Penak.
Balanostreblus ilicifolius, Kurz. (*Urticaceæ*).	Limau Lelang Antan.
Barclaya (Motleyana, Hk. f. (*Nympheaceæ*).	Daun Kalapa.
Barleria prionitis, L. (*Acanthaceæ*).	Bunga Landak.
Barringtonia macrostachya, Wall. (*Myrtaceæ*).	Putat hutan. Putat Bukit putih.
B. Scortechinii, King	Putat Gajah.
B. sumatrana, Miq.	Putat Darat. Putat Gajah.
B. fusiformis, King	Putat Padi.
B. spicata, Bl.	Juri-Juri.
Bassia Motleyana, Clarke (*Sapotaceæ*).	Maiang.
B. sp.	Gugating.
Bauhinia bidentata, Jack. (*Leguminosæ*).	Katup-Katup.
B. integrifolia, Rox.	Kang Katok (Selangor). Dau. Akar Dadaup (Pahang).
B. Kingii, Prain.	Akar suloh.
B. Hullettii, Prain.	Akar tapa kudah antan.
Benincasa cerifera, Sav. (*Cucurbitaceæ*).	(Wax Gourd), Kundor. K. China. K. Jawa, varieties.
Bidens pilosa, B. (*Compositæ*).	Rumput Juala.
Biophytum adiantoides, Wt. (*Geraniaceæ*).	Payong Ali.
Bixa orellana, L. (*Bixineæ*).	Kusumba. Kunyit Jawa
Blainvillea latifolia, Ad. C. (*Compositæ*).	Rumput Babi. Katumbit Padang. Tutop Bumi Paya. Salamani.

Blechnum orientale, L. (*Filices*).	Paku Ikan. P. Ubil. P. Ular.
Blumea balsamifera, De. C. (*Compositæ*).	Chapa. Chapu. Sembong Sumbong.
B. lacera, De. C.	Lumai Hitam.
Boehmeria nivea, Hk. f. (*Urticaceæ*).	Rami-Hami. Ramin.
Bonnaya veronicæfolia, Spr. (*Scrophularineæ*).	Kerak-Kerak. Jantan Merah. Sampu Chachang.
Borassus flabellifer, L. (*Palmæ*).	Lontar. Tah (Telubang).
Boschia Griffithii, Nees. (*Malvaceæ*).	Durian-Durian. Dendurian. Durian Haji. Dada Ruan. (Johor).
Bouea macrophylla, Griff. (*Anacardiaceæ*).	Kundangan.
B. microphylla, Griff.	Ruminiya. Rumia.
Bragantia corymbosa, Griff. (*Aristolochiaceæ*).	Akar Surai. A. Julong Bukit. Changi Ular. Chumbai Ular.
Brassia oleracea, L. (*Cruciferæ*).	Kobis. (The cabbage).
B. nigra, L.	Sawi. Sesawi. Sayur. (Mustard).
Breynia coronata, Hk. f. (*Euphorbiaceæ*).	Hujan Panas. Rumang Panas. Chuma Padang. (Kedah).
B. reclinata, Hk. f.	Hujan Panas. Peringit. Sumbor.
B. rhamnoides, Muell.	Suruyian.
Bridelia pustulata, Hk. f. (*Euphorbiaceæ*).	Kenidei Hutan. K. Gajah. Bubongkal.
B. stipularis, Hk. f.	Kenidei Babi.
B. tomentosa, Bl.	Kenidei. K. Jantan. Nidei.
B. sps.	Nidei. Kenidei.
Brownlowia lanceolata, Benth.	Durian Laut.
Brucea sumatrana, Wall. (*Simarubeæ*).	Cherek Jantan. Embalau. E. Padang. E. Betina. Hampedu Bruang. Lada Pahit (Pahang).

Brugueria carophylloides, Bl. (*Rhizophoreæ*).	Bakau Putih.
B. gymnorhiza, Lam.	Tumu.
B. parviflora, W. & A.	Lenggadi.
B. sp.	Bungkup. (Johor).
Bryophyllum calycinum, Salisb. (*Crassulaceæ*).	Tumbu Daun. Sadingin. (Malacca) Karanchong (Pahang).
Buchanania acuminata, Turcz. (*Anacardiaceæ*).	Otak Tudang. Kutak Hudang. (Johor). Katawa Hudang. Temohong. Gulawai.
B. lucida, Turcz.	Kelompang Kras. (Kedah).
Burmannia coelestis, Don. (*Burmanniaceæ*).	Rumpot Sisik Naga.
Byttneria Maingayi, Hk. f. (*Tiliaceæ*).	Akar Batu. A. Kachubong.
B. uncinata, Mast.	Sugi Jantan.
Cesalpinia pulcherrima, Rox. (*Leguminosæ*).	Chana (Favre).
C. sappan, L.	Sepang.
Cæsulia axillaris, L. (*Compositæ*).	Chinkro, Kangkong kerbau.
Cajanus indicus. L. (*Leguminosæ*).	Kachang kayu.
Calamus castaneus, Griff. (*Palmæ*).	Atap Chuchur. Rotan Chuchur.
C. aquatilis, Ridl.	Rotan ayer.
C. Lobbianus, Becc.	Rotan Manana.
C. didymophyllus, Becc.	Rotan Getah. R. Hudang.
C. Diepenhorstii, Muell.	Rotan sago. R. chichi.
C. insignis, Griff.	Rotan Batu.
C. Javensis, Bl.	Rotan Lilin. R. Sundek (Perak).
C. ornatus, Griff.	Rotan kumbang. R. Sega Badak.
C. oxleyanus, Griff.	Rotan Pujare. (Griffith).
C. scipionum, Lour.	Rotan Semambu (Malacca Cane). Rotan Rajah.

Calanthe rubens, Ridl. (*Orchideæ*).	Haliya Enggang (Lankawi).
C. veratrifolia, Lindl. and other species.	Lumbah.
Callicarpa arborea, Rox. (*Verbenaceæ*).	Ambong-ambong Putih. Kata kran.
C. cana, L.	Tampang Besih Putih.
C. lanata, Griff.	Balik Angin Laut. Chulak. Tuloh Putih.
C. longifolia, Lam.	Tampang Besih. Tampoi. Besih. Tampo Besih.
Calophyllum inophyllum, L. (*Guttiferæ*).	Bintangor Bukit, B. Bunga. Penaga. Pudih (Malacca).
C. macrocarpum, Hk. f.	Bintangor Rimbah.
C. pulcherrimum, Wall.	Bintangor Batu. B. Besar. B. Bukit.
C. Wallichiana, Pl.	Bintangor Merah.
C. spectabile, Willd.	Bintangor Bunut.
Calotropis gigantea, Br. (*Asclepiadeæ*).	Beduri. Kemengu.
C. procera, Br.	Lambega.
Campnospermum auriculata, Hk. f. (*Anacardiaceæ*).	Terentang.
C. oxyrrhachis, Engl.	Mulumut.
Canarium commune, L. (*Burseraceæ*).	Kenari.
C. Kadondon, Benn.	Kadongdong Krut. K. Mata Hari. Gigit Buntai.
C. laxum, Benn.	Rau.
C. nitidum, Benn.	Dongdong. Kadongdong. K. Hutan.
C. pilosum, Benn.	Kadongdong Hutan.
C. rufum, Benn.	Kadongdong Bulan. Kerat Telampok. K. Tulonjok. Sungol Hutan. Sangol Hutan.
C. secundum, Benn.	Damar Kijai. Kasumba. Kasumbi.

C. sps.	Blau (Johor) Rota (Johor).
Cananga odorata, L. ... ... (*Anonaceæ*).	Kananga. Kenanga.
Canangium Scortechinii, King. (*Anonaceæ*).	Kasidang (Malacca).
Canavalia ensiformis var gladiata. ... ... (*Leguminosæ*).	Kachang Parang.
C. obtusifolia, De C.	Kachang Rang-rang. Kachang hantu.
Canna edulis, L. ... .. (*Scitamineæ*).	Pisang Sebiak.
C. indica, L.	Sebeh. (Favre).
Cannabis sativa, L. ... ... (*Urticaceæ*).	Ganja. Gunja.
Cansjera Rheedii, W. and A. ... (*Olacineæ*).	Bittot. Chemperai. Chimperai.
Canthium confertum, Korth. ... (*Rubiaceæ*).	Kamuning Jantan Hutan. Mata Keli Jantan.
C. didymum, Rox.	Butulang.
C. glabrum. Bl.	Mungkoi. Sabusuh Betina.
C. horridum. Bl, ...	Bulang Gajah. B. Kechil. B. Hitam. Bulang Tikus.
C. oliganthum, Miq.	Akar Pelandok.
C. sp.	Akar Kuku Baning.
C. sp.	Akar Lempedu Borong. Kulurai. Surumat.
C. sp.	Gading. Surumat.
Capsicum annuum, L. ... ... (*Solanaceæ*).	Chabai. Lada Merah.
C. bicolor, Jacq.	Chabai selasah (Clifford).
C. frutescens, L.	Chabai Achong. C. Sebrang.
C. fastigiatum, Bl.	C. Rawit.
Carapa moluccana, Lam. ... (*Meliaceæ*).	Nireh.
Carallia integerrima, Dec. ... (*Rhizophoreæ*).	Bong-bong. Merpoin. Janggut Keli. Kusinga.

Cardiopteris lobata, Br. *(Olacineæ).*	Gambah Putih. (Pahang).
Cardiospermum Halicacabum, L. *(Sapindaceæ).*	Peria Bulan. Akar Uban Kayu.
Carex cryptostachys, Hance. *(Cyperaceæ).*	Rumput Ringgin.
Carica papaya, L. *(Papayaceæ).*	Betik. B. Belulang. B. Bubor.
Carissa Karandas, L. *(Apocynaceæ).*	Kerandang.
Carum Carui, L. *(Umbelliferæ).*	Jintan. (Carraway seed. Imported).
Caryota mitis, Lour. *(Palmeæ).*	Bredin (Province Wellesley) Tukus.
Casearia Lobbiana, Turcz. *(Samydaceæ).*	Medang Kirisa.
Cassia alata, L. *(Leguminosæ).*	Daun Kurap. Glenggang.
C. augustifolia, Vahl.	Sena. S. Maki.
C. fistula, L.	Biraksa. Bereksa.
C. javanica, L.	Dulang.
C. nodosa, Ham.	Busok-Busok. Sibusuk. Turukop Bumi.
C. occidentalis, L.	Kachang Kota.
C. Siamea, Lam.	Jua. Jual. Guah Hitam (Johor).
C. tomentosa, L.	Sinteng.
C. obtusifolia, L.	Glenggang Kechil. G. Padang.
Castanopsis Hulletti, King. *(Cupuliferæ).*	Berangan Papan.
C. hystrix, De C.	Kata Bileh. Sebilek.
C. javanica, Dcn.	Berangan Duri. B. Gajah.
C nephelioides.	Resak
Casuarina equisetifolia, Forst. *(Casuarineæ).*	Ru. Kayu Ru. Ru Laut. Aru.
Cedrela febrifuga, Bl. *(Meliaceæ).*	Suntang Putih.

Celastrus monospermus, Roxb. (*Celastrineæ*).	Gurugun. Akar Serapoh.
Celosia cristata, L. (*Amarantaceæ*).	Bayam Ekor Kuching.
Centotheca lappacea, Beau. (*Gramineæ*).	Rumput Silat Kain.
Ceratolobus Kingiana, Becc. (*Palmeæ*).	Rotan Kipas.
Cerbera lactaria, Ham. (*Apocynaceæ*).	Babuta. Buta-Buta. Pong-Pong (Selangor).
C. odollam, L.	Babuta. Buta-Buta. Pompong (Pinang) Bintan. Bintaro.
Cephaelis Griffithii, Hk. f. (*Rubiaceæ*).	Chempaka Bukit Pupulut Hutan. Sabiak Gajah.
Ceriops Candolleana, Arn. (*Rhizophoreæ*).	Tengah. (Bark used for tanning).
Chœtocarpus castanocarpus (*Euphorbiaceæ*).	Bedi (Pinang).
Chailletia deflexifolia, Turcz. (*Chailletiaceæ*).	Akar Pah Kuda. A. Sarang Punai. A. Tugor Pontianak.
C. Griffithii, Hk. f.	Kurupoh Bukit. Kurutot. Akar Puleh Kambing. A. Puleh Angin.
C. sp.	Angos (Kedah).
Chamœcladon angustifolium, Schott. (*Aroideæ*).	Bakung Ayer Kaati (Johor).
C. Griffithii, Hk. f.	Asam Tikus. Kumayang, Kelamoyiang Padi.
Champereia Griffithii, Hk. f.	Chemperai. Chimperai.
Chasalia curviflora, Miq. (*Rubiaceæ*).	Buah Bras. Gading Galok. Jarum Hitam. Gandarusa Jantan. Pecha Piring Hitam Kamiri. Piu-Piu. Pecha Priok Putih.
C. c. var. angustifolia.	Sumpoh Sumut. Tubang.
Cheilanthes tenuifolia, Sw. (*Filices*).	Paku Resam. Padi. Paku Resam Lumut.

Chilocarpus Maingayii, Hk. f. (*Apocynaceæ*).	Gunum.
Chonemorpha macrophylla. (*Apocynaceæ*).	Gegrip Merah.
Chisocheton divergens, Bl. (*Meliaceæ*).	Garontong Tengah.
C. penduliflorus, Bl.	Medang Kasungko. Sanggol Lutong Hitam.
C. sp.	Sadapu.
Chloranthus officinalis, Bl. (*Chloranthaceæ*).	Sambon Paya, Sumban Paya.
Chrysophyllum Roxburghii, Don. (*Sapotaceæ*).	Kayu Malukut. Poko Pulut-Pulut.
Cibotium Barometz. (*Filices*).	Penawar Jambi.
Cicca acidissima. (*Euphorbiaceæ*).	Chamin-Chamin.
Cinnamomum camphora, L. (*Laurineæ*).	Kapur Tohori (Japan camphor.
C. culit lawan, Nees.	Lawang. Kulit Lawang.
C. iners, Bl.	Singga Betina. Kayu Manis.
C. mollissima, Bl.	Pialu. (Johor). Tegah. Tegoh. (Favre).
C. nitidum, Bl.	Lelang.
C. parthenoxylum, Miess.	Chinta. Medang Kemana. Kayu Gadis. Kulit Lawa. Mula Hitam.
C. Zeylanicum, L.	Kayu Manis. (Cinnamon).
C. sp. (Pahang).	Tejă.
Cissampelos Pareira, L. (*Menispermaceæ*).	Mumpanang. Lumkang. Gasing-Gasing. Gegasing.
Citrus acida, Rox. (*Rutaceæ*).	(Common Lime). Limau Kedangsa. L. Kapas. L. Kasturi L. Kerbau. L. Nipis. L. Perut. L. Susu.
C. aurantium, L.	(Orange) Limau manis. Wangkang (Chinese us).
C. a. var. Bigardia (Favre).	(Bitter Orange) Limau Gede.

C. decumana, L.	(Pomelo) Limau Kedangsa. (Favre) L. Abong, L. Batawi: L. Besar (Favre).
C. d. var.	(Wild Pomelo) Limau Hantu. (Pahang, Malacca).
C. medica.	(Citron) Limau Bali (Favre).
Clausena excavata, Burm. (*Rutacæ*).	Chenama (Pinang). Cherek Hitam.
Clavaria sps. (Fungis).	Chendawan Samangkok.
Cœtanthus hirsutulus, Hk. f. (*Euphorbiaceæ*).	Kurudas Bukit. Simpoh Ayer. Tongmogu.
C. lœvis, Hk. f.	Jarak Pipit, Kurumak Hutan.
C. nitidus, Hk. f.	Sabasah Batu.
C. sp.	Surangkiang.
Clerodendron deflexum, Wall. (*Verbenaceæ*).	Cherit Hutan. Lidah Kerbau. L. Kerbau Betina. Sumpu Kuhao. Sembong Hutan Jantan. Picha Priok Hitam. Sakacha Lima.
C. disparifolium, Bl.	Guriam (S. Ujong). Lampang Badak. Lelampang Badak. Tudong Ruman. Sempian Petri. Sembang. Lulangring Budan. Seliguri. S. Betina.
C. fallax, L.	Orawari Rungkup.
C. fragrans, Vent.	Rabu Kumbang.
C. inerme, Gaertn.	Pawan.
C. nutans, L.	Mali-mali Bukit. Piango. Unting-unting. Meroyan Kabut.
C. paniculatum, L.	Penkilai.
C. siphonanthus, Br.	Gunja-ganja. Penatoh.
Cl. serratum, Spreng.	Lampin Budak.
C. villosum, Bl.	Chapah. Champening. Kasap. Tapak Kerbau. Picha Priok Babi.
Clinogyne dichotoma, Salisb. (*Scitamineæ*).	Bemban Ayer.

C. grandis, Benth.	Bemban Gajah. Tongkat Setau.
Clitoria cajanifolia, Benth. (*Leguminosæ*).	Beluntas Padi (Malacca). Rumput Sabusuk. R. Turi.
C. ternatea, L.	Bunga Biru. Kachang Telang.
Cleome viscosa, L. (*Cruciferæ*).	Kuteping. (Malacca).
Cnestis ramiflora, Griff. (*Connaraceæ*).	Akar Gasing-Gasing. A. Padang. Semilat Merah. S. Papan. S. Padang. Akar Perjep.
Cnesmone Javanica, Bl. (*Euphorbiaceæ*).	Jelatang Badak.
Cocos nucifera. (*Palmeæ*).	Kalapa. Niyur.
Codaeum variegatum, Bl. (*Euphorbiaceæ*).	Puding. Adal-adal (Javanese)
Cœlodiscus montanum, Muell. (*Euphorbiaceæ*).	Gelam Bukit.
Cœlogyne Rochussenii, DeVr. (*Orchideæ*).	Sakat Tulong Ular.
Cœlostegia Griffithii, Most. (*Malvaceæ*).	Pungai. Punggai. Ha-Ha.
Coffea arabica. (*Rubiaceæ*).	Kopie.
C. liberica, Hiern.	Kopie. Kahwa.
Coix lachryma, L. (*Gramineæ*).	Jilei Batu. J. Pulut (the dark colored variety)
Coleus Blumii, Benth. (*Labiateæ*).	Ati-Ati.
Colocasia antiquorum, Schott (*Aroideæ*).	Birah Keladi. Keladi Telor. K. China. K. Hudang.
Combretum extensum, Rox. (*Combretaceæ*).	Sarudang Betina.
C. sundaicum, Miq.	Akar Gegambar.
C. trifoliatum, Vent.	Akar Sung-sung. Harus.
Commersonia echinata, Forst. (*Tiliaceæ*).	Durian Tupai. Chenara.

Commelyna benghalensis, L. ... (*Commelynaceæ*).	Mayiam.
C. nudiflora, L.	Rumput aur. Kukupo.
Connaropsis monophylla, Pl. ... (*Geraniaceæ*).	Belimbing Besi. B. Bulat. B. Hutan. B. Keris. B. Kra. B. Penjuru. B Pipit.
C. sp.	Kupoi. Pupoi.
Connarus ferrugineus, Jack. ... (*Connaraceæ*).	Bunga Burutta. Akar Pulau. Hantu. A. Sakelet. A. Merah. A. Sanderap.
C. gibbosus, Wall.	Akar Tulang Padang. Namo.
C. grandis, Jack.	Akar Tulang Padang.
C. semidecandrus, Jack. ...	Akar Tukor.
Conocephalus amœnus, King. ... (*Urticaceæ*).	Ara Jankang.
C. Scortechinii, Hk. f. ...	Akar Umu (Johor).
C. suaveolens, Bl.	Akar Tentawan.
C. subtrinervis, Miq. ...	Landong Padi. Akar Sandang Padi. A. Sasaram.
Coptosepalta flavescens, Korth. (*Rubiaceæ*).	Akar Sabusuh.
C. griffithii, Hk. f.	Akar Bunga Milor Hutan. Situlang (Pahang) Sumpu Puchut.
Corchorus acutangulus, Lam. ... (*Tiliaceæ*).	Rumput Baya Roasa
C. capsularis, L.	Sunarong Betina.
Cordyline terminalis, Kunth. ... (*Liliaceæ*).	Andong. A. Hijau. A. Merah. Jejuang (Singapore) Lenjuang Merah.
Coriandrum sativum ... ... (*Umbelliferæ*).	Katumbar. (Coriander seed).
Corymborchis veratrifolia, Thouars. ... ... (*Orchideæ*).	Lulumbah Paya.
Coscinium Blumeanum, Miers. ... (*Menispermaceæ*).	Akar Mengkunyit.
C. fenestratum, Coleb. ...	Kugit-Kugit Babi Tol. (Vaughan Stephens).

Cosmos caudatus, H. B. K. (*Compositæ*).	Ulan Rajah.
Costus speciosus, L. (*Scitamineæ*).	Sitawa. Satawa. Tawa-Tawa Antar.
Cratoxylon polyanthum, Korth. (*Hypericineæ*).	Drum (Penang) Mempat-Mempat Hutan. Lunchui.
C. arborescens, Bl.	Geronggang. Geronggong. Penaga Hitam (Johor).
C. formosum, Benth.	Mempapit. Mempas Hutan. Mempetis. Sepadas Bunga (Jack).
Crinum asiaticum, L. (*Amaryllideæ*).	Bakung. Bawang Hutan. Bunga Tembaga Suasa. Landap. Silandap. Selandap (Favre).
Crocus sativus, L. (*Irideæ*).	Kumkumah (Pollen of C. sativus imported). Saffron.
Crotolaria alata, Hamilt. (*Leguminosæ*).	Kachang Hantu Darat.
C. retusa, L.	Giring Landak.
C. striata, De C.	Giring-Giring. Guring-Guring. Rang-Rang.
C. verrucosa, L.	Gigeling. G. Jantan.
Croton argyratus, Bl. (*Euphorbiaceæ*).	Chendrai Gajah. Cherit. Budak Mungke Senanchong. Summungke. Sumangso. Hamba Rajah (Penang).
C. caudatus, Geisl.	Ara Lumut. Akar Tuko Takal. Pauh-Pauh. Peringat Kating.
C. Griffithii, Hk. f.	Gulumbong Hantu. Lidai Api. Marai. Tumpang. Tumpang Bliong. Siangus. Kayu Meruan.
C. oblongifolius, Rox.	Chalang Paya.
C. sublyratus, Kurz.	Balik Angin Bukit.
C. Tiglium, L.	Bua Chengkian.

Crataerea macrocarpa, King. ... *(Cappavideæ).*	Kadat. Kelambai (Malacca). Kulumbai.
C. religiosa var Narvala. ...	Bulan Ayer.
C. sp.	Bulan Betul.
Crypteronia Griffithii, Hk. f. ... *(Lythraceæ).*	Sumpu Telinga Badak.
C. pubescens, Bl.	Bekwoi. Babi Buah.
C. paniculata	Rupal.
Cryptocarya cœsia, Bl.... ... *(Laurineæ).*	Kayu Grisik. Medang Lasa. Rangan.
C. ferrea, Bl.	Langirtan Kwas. Mumpat Jantan.
C. Griffithiana, Wight. ...	Medang Buaya. M. Mantu. Rambahan Bukit. Sigun. Simpoh Bukit. Tubo Buah.
C. impressa, Miq.	Kayu Kunyit. Kichie. Medang Nau. Menjuat.
C. sp.	Manamak.
Cryptocarpus Griffithianum, Wight. ... ... *(Laurineæ).*	Dring (Johor) Laiang
Cryptocoryne cordata, Griff. ... *(Aroideæ).*	Ati-Ati Paya.
Ctenolophon parvifolius, Oliv.... *(Olacineæ).*	Kelat Hitam. Kunus. K. Bruang. Mata Kelat Bangkal. B. Paya.
Cucumis sativus, L. ... ... *(Cucurbitaceæ).*	Timun China (Cucumber) ...
Cucurbita pepo, L. ... ... *(Cucurbitaceæ).*	(Pumpkin) Labu Ayer. L. Manis. L. Pringgi, varieties.
C. maxima, Duchesne. ...	(Gourd) Labu.
Cumpassia Malaccensis, Maingay. ... ... *(Leguminosæ).*	Kempas.
C. parvifolia, Prain.	Sialang, Tualang.
Cuminum Cyminum, L. ... *(Umbelliferæ)*	Jintan Putih. (Cumin seed).

Cupania Lessertiana, Camb. (*Sapindaceæ*).	Ludai Bulan. Medang Serai. Perepat Bukit. Tasai (Malacca).
C. pallidula, Hiern.	Kelilayan Putih. Nilau.
C. pleuropteris, Hiern.	Sempayan Ulur (Malacca).
C. pubescens, Radlk.	Sugi (Maingay).
Curculigo recurvatu, Dry. (*Hypoxideæ*)	Lumbah Merah.
C sumatrana, Rox.	Lumbah. L. Rimbah. Kalapa Puyuh. Linsubah (Pahang)
Curanga amara, Juss. (*Scrophularineæ*).	Labang. Gelumah Susu.
Curcuma longa, L. (*Scitamineæ*).	(Turmeric) Kunyit-Kunyit. Temu Kunyit.
C. Zedoaria, Roscoe.	Temu Lawas. (White Turmeric).
Cyathea Brunonis, Wall. (*Filiceæ*).	Paku Gajah Paya. P. Hitam. Paya. P. Pahat. P. Selama.
Cyathula prostrata, Bl. (*Amarantaceæ*).	Angkop Merah. Bayam Rusa. Rumput Jarang-Jarang. Kelulut Merah. Senjarang.
Cycas Rumphii, Miq. (*Cycadeæ*).	Bogah (P. W.) Paku Aji. P. Laut. Saba and Tiyung (Favre).
Cyclea Arnotti, Miers. (*Menispermaceæ*).	Akar Rempenang (Selangor) Trongkuman (Lankawi).
Cyathostema Scortechinii, King. (*Anonaceæ*).	Akar Mupisang.
Cyclostemon longifolius, Bl. (*Euphorbiaceæ*).	Gelugur Salah.
Cynanchium sp. (*Asclepiadeæ*).	Akar Rambut Chambe.
Cynometra cauliflora, L. (*Leguminosæ*).	Nam-Nam. Puki Anjing.
C. polyandra, Rox.	Malangkan. Bulangkan. Katong.
Cyperus compressus, L. (*Cyperaceæ*).	Rumput Tiga Sari.
C. distans, Br.	Rumput Wangi.

C. haspan, L.	Rumput Biblis Jantan. R. Sumbo.
C. iria, L.	Rumput Suloh Belalang.
C. pilosus, Rottb.	Rumput Para-Para (Malacca)
C. procerus, Rottb.	Rumput Munsiang. R. Manseyang.
C. pumila, Vahl.	Rumput Saman.
C. rigidulus.	Rumput Chukor Kerbau.
C. venustus, Br.	Peparu.
Cypripedium barbatum, Lindl. (*Orchideæ*).	Bunga Kasut.
Cyrtandromea megaphylla, Hems. (*Gesneriaceæ*).	Sumpu Munahan. Supujit Bukit.
Cyrtosperma lasioides, Griff. (*Aroideæ*).	Birah Hutan. Keladi Pari. Gli-Gli.
Cyrtostachys lacca, Scheff. (*Palmeæ*).	Pinang Rajah.
Dacrydium elatum, Wall. (*Coniferæ*).	Ru Bukit.
Daemonorops calicarpus, Griff. (*Palmeæ*).	Rotan Chuchur minyak.
D. crinitus, Bl.	R. Chin-Chin.
D. Draco, L.	Jerenang. Rotan Jerenang.
D. geniculatus, Mart.	Rotan Kerai. R. Kamunting. R. Chin-Chin. R. Gulang. R. Tunggal.
D. grandis, Mart.	R. Semambu. R. Sunang. R. Chrysa (Griffith).
D. hystrix, Mart.	Rotan Buah. R. Sabut.
D. leptopus, Mart.	R. Bakau, R. Muruseh.
D. longipes, Mart.	Rotan Machap. R. Sepah. R. Chuchor.
D. micracanthus, Griff.	Rotan Tahi Ayam.
D. propinquus, Becc.	Rotan Bakau. R. Jerenang. (Malacca).
D. verticillaris, Mart.	R. Chin-Chin, R. Gulang.
Dalbergia Junghuhnii, Benth. (*Leguminosæ*).	Saga Paya.

Daldinia vernicosa, Cesati. (*Fungi*).	Jumput-Jumput.
Dammara orientalis, Lam. (*Coniferæ*).	Damar Minyak.
Daphniphyllum laurinum, Bl. (*Laurineæ*).	Chicha. Jinjarong Jantan. Mempit Padang. Serapoh. Rupah. Ruas-Ruas Jantan.
Datura metel, L. and D. fastuosa, L.	Kachabong. Kachubong.
Decaspermum paniculatum, Kurz. (*Myrtaceæ*).	Kelintat Kring. K. Nyamok. Kelapit Nyamok. (Singapore) Empoyan Padang. Kelentat Padang. Kamuning Batu. Kelat Paya. Salah Nama.
Dehaasia sp. (*Laurineæ*).	Pekan.
D. sp.	Bulonggo.
D. sp.	Gajah. Gajus Hutan.
Delima sarmentosa, L. (*Dilleniaceæ*).	Ampalas Tikus.
Dendrocalamus flagelifer, Munro (*Palmeæ*).	Buluh Betong Perih.
D. strictus, Nees.	Buluh Brang.
D. strictus, Ham.	Buluh Batu. B. Tampat.
Dendrobium conostalix, Reich. f. (*Orchideæ*).	Rumput Rajah Sari.
D. crumenatum Sw.	Anggrek Merpati.
D. pumilum, Rox.	Sakat Kulumbai.
Dentella repens, Forst. (*Rubiaceæ*).	Bunga Karang.
Derris elliptica, Benth. (*Leguminosæ*).	Tubah.
D. Maingayana, Hk. f.	Akar Tubah-Tubah. A. Pah Kedah.
D. thyrsiflora, Benth.	Akar Tulang Bukit: A Berumbat.
D. uliginosa, Benth.	Akar Ketuil.

Desmodium heterophyllum, De C. (*Leguminosæ*).	Omba-Omba (Singapore). Akar Sisik Niga. A. Telinga Tikus.
D. latifolium, Wall.	Kamani Babi. Katah. Serengam.
D. parvifolium, Bak.	Akar Seliguri.
D. polycarpum, De C.	Kachang Kayu Betina. Kalumbar. (Pahang). Rumput Kerbau Drapah. Katumbar.
D. umbellatum, De C.	Petai Belalang.
Dialum laurinum, Baker (*Leguminosæ*).	Kranji Papan.
D. Maingayii, Baker	Keranji Burong. Mumpanjor.
D. platysepalum, Baker	Keranji Tembaga. K. Papan.
D. patens, Baker	Keranji Umbut. Sepan. (Malacca).
Dianella ensifolia, Red. (*Liliaceæ*).	Meroyan Bungke. Satigit. Siak-Siak Jantan.
Dichopsis gutta, Benth. (*Sapotaceæ*).	Taban. Teban. Getah Taban Merah. Getah Percha. Percha.
D. pustulata, Clarke	Getah Taban Chaia.
D. sp.	Simpor (Perak).
D. obovata, Clarke	Getah Taban Putih. Belian Wangie.
Dictyophora campanulata, Nees. (*Fungi*).	Chendawan Telakong.
Didymocarpus, atrosanguinea, Ridl. (*Gesneriaceæ*).	Meroyan Nibut.
D. crinita, Jack.	Sumbong Merah. Tummu.
D. reptans, Jack.	Tummu Kechil. (Jack is the authority for these two last names which are doubtful).
Dillenia indica, L. (*Dilleniaceæ*).	Simpoh. Simpuh. Chimpuh.

Dioclea reflexa, Hk. f. (*Leguminosæ*).	Kachang Laut (Pahang).
Dioscorea alata, Rox. (*Dioscoreaceæ*).	Ubi Nasi.
D. daemonum, Rox.	Gadong. Gadung.
D. glabra, Rox.	Janggut Kulonak. Akar Kakop. A. Mawas. A. Munujan.
D. laurifolia, Wall.	Akar Kamahang. A. Surunting.
D. oppositifolia, Bl.	Akar Keminiyan Hantu. Akar Klana.
D. pentaphylla, L.	Ubi Pasir, U. Jabbet. (Vaughan Stevens. (?Chiabet).
D. pyrifolia, Korth.	Akar Gulongo. A. Keminiyan Paya.
D. sp.	Akar Nana.
Diospyros discolor, Willd. (*Ebenaceæ*).	Buah Manteiga. Pisang kaki (Penang).
D. argentea, Griff.	Bedil Lalat. Buluh-Buluh.
D. hirsuta, var. lucida, Wall.	Taring Pelandok. Sengkawas Hitam Mati.
D. lucida, Hiern.	Koguel. Kayu Arang. Lang-Kgadi.
D. oblonga, Wall.	Sumoi. (Pinang.)
D. sp.	Siangan Jantan.
D. sp. near embryopteris.	Mentubo. (Malacca.)
Dipterocarpus crinitus, Dyer (*Dipterocarpeæ*).	Minyak Keruing. M. Keruing Buluh. Gombang.
D. Hasseltii, Bl.	Minyak Keruing.
D. Kerrii, King	Keruing Chaia.
D. oblongifolius, Bl.	Nerrum. (Pahang.) Meran.
D. pterygocalyx, Scheff.	Keruing Dadek. K. Buku.
Diplanthera bancana, Scheff. (*Bignoniaceæ*).	Chenderu.
Diplazium sorzogonense, Presl. (*Filiceæ*).	Paku Kijang. P. Rusa.
D. tomentosa, Hk.	Paku Binit.

Dipodium pictum, Rchb. fil. (*Orchideæ*).	Wa-Wa. (V. Stephens.)
Diplospora sp. (*Rubiaceæ*).	Uloh-Uloh.
D. sp.	Chinduru. Sugai Petaling.
Dischidia albida, Griff. (*Asclepiadeæ*).	Akar Sabernas.
D. collyris, Wall.	Petis (Johore).
D. Rafflesiana, Wall.	Akar Kul. A. Bano.
Dissochaeta bracteata, Bl. (*Melastomaceæ*).	Akar Meroyan Sejuk.
D. celebica, Bl.	Meroyan Jantan. M. Paya. Mumpoyan Paya.
D. punctulata, Hk. f.	Meroyan Busuk. Akar Sendudok.
Dolichandrone Rheedii, Seem. (*Bignoniaceæ*).	Kulo.
Dolichos lab-lab, L. (*Leguminosæ*).	Kachang Jariji. K. Karkaras. K. Kunyit. Karkaras.
Dracaena breviflora, Ridl. (*Liliaceæ*).	Pumaton. (Selangore).
D. congesta, Ridl.	Juang-juang Bukit.
D. ternifolia, Rox.	Sanjuan Bukit.
D. angustifolia, Wall.	Chamau. Chemau.
D. Maingayii, Baker.	Chamau. Chemau.
Dracontomelum mangiferum, Bl. (*Anacardiaceæ*).	Sakai. Sangkuang. Changkuang.
Drepananthus cauliflorus, Hk. f. (*Anonaceæ*).	Antoi Putih.
D. pruniferus, Hk. f.	Antoi itam.
Dryobalanops camphora, Gaertn (*Dipterocarpeæ*).	Kapur Barus.
Drymoglossum piloselloides. (*Filices*).	Sakat Ribu-ribu.
Duabanga sonneratioides, Ham. (*Lythraceæ*).	Kudada. Berumbong Bukit.
Durio oxleyanus, Mast. (*Malvaceæ*).	Durian Daun. Kuripal. (Johor).
D. testitudinarium, Becc.	Durian Tanah. D. Burong.

D. zibethinus, L.	Durian.
Dyera costulata, Hk. f. (*Apocynaceæ*).	Jelutong. J. Pipit. Getah Jelutong.
D. Maingayii, Hk. f.	Same names as D. costulata.
Dysoxylon acutangulum, King. (*Meliaceæ*).	Pasak Lingga.
D. angustifolium, King.	Kamanjong. (Pahang). Dosono. (Pahang).
D. cauliflorum, Hiern.	Balun Hijau. Guatak. Kuleun. Jarong.
D. macrothyrsum, Miq.	Kasip Hutan. Kombel. (Malacca).
D. sp.	Rongga.
Dysophylla auricularia, Bl. (*Labiatæ*).	Ekor Kuching.
Ebermaiera angustifolia, Anders. (*Acanthaceæ*).	Kerak Rimbah. Kumoja Batu.
E. Griffithiana, Anders.	Ambong Bukit.
E. setigera, Nees.	Serawan Kubang.
Eclipta alba, L. (*Compositæ*).	Rumput Beu. Kurumak Jantan.
Elateriospermum Tapos, Miq.	P'rah.
Elæocarpus Hullettii, King. (*Tiliaceæ*).	Darumun Pipit.
E. integra, Wall.	Medang or Mendong Pepilakan. M. Tandjong.
E. Jackianus, Wall.	Jatek-Jatek. Jentek-Jentek.
E. Mastersii, Hk. f.	Chemanton Merah. Lempedu Burong. Medang Asam. M. Lansor. M. Suggueh. Perah Paya.
E. obtusus, Bl.	Medang Kawan. M. Paya. M. Tanah.
E. paniculatus, Wall.	Darumun Hitam. Mendong Musang. Tingar Belukar.
E. parvifolius, Wall.	Jambu Kelawar. J. Kelat Lawar Putih. Medang Api. M. Pipit. Mendong Kelawar. Munsaga, Paroh.

E. pedunculatus, Wall.	...	Darumun Padi.
E. polystachyus, Wall.	...	Darumun (Malacca). Darumun Babi.
E. robustus, Rox. ...	...	Barong. Kunkunan Jantan. Obah. Sito. Sopi.
E. salicifolius, King. ...	...	Darumun Padi.
E. spp.	...	Darumun Juromong. Mendong-mendong.
E. stipularis, Bl. ...	..	Darumun Pelandok. Medang Tijo. Paroh. Ungank. Pulai Pipit.
Ellipeia nervosa, Hk. f. (*Anonaceæ*).	...	Kenchong.
Elephantopus scaber, L. (*Compositæ*).	...	Tutop Bumi.
Eleusine coracana, L. ... (*Gramineæ*).	...	Sambau.
Embelia amentacea, C. B. C. (*Myrsineæ*).	...	Akar Malukut.
E. coriacea var. ...	...	Akar Sakarito (Pahang).
E. Limpanii, Scheff.	...	Akar Dulang-Dulang. Akar Dudulang.
E. ribes, Burm. ...	...	Akar Sulu Karang.
Emilia sonchifolia, De C. (*Compositæ*).	...	Katumbit Jantan. Setumbah Merah.
Endospermum Malaccense, M. Arg. ... ... (*Euphorbiaceæ*).	...	Medang Klabu. Sendok-Sendok.
Enhalus acoroides, Zoll. (*Hydrocharideæ*).	...	Deringu. Jeringu Laut.
Entada scandens, L. ... (*Leguminosæ*).	...	Akar Beluru.
Epipremnum giganteum, Schott. ... (*Aroideæ*).	...	Ringut.
Epiprinus malaccensis. (*Euphorbiaceæ*).	...	Bantun Hitam.
E. Malayanus, Griff. ...	...	Balong Hijau. Kasumba. Chendra. Chendui. Munot.

Eria pellipes, Lindl. (*Orchideæ*).	Angrek Gading Gajah. (Malacca).
Erianthemum album, Nees. (*Acanthaceæ*).	Kumoja Hutan.
E. malaccense. C. B. C.	Gurah Bukit. Kamoyan. Melor Hutan. Pecha Priok Biru. Suluang Mudah. Tampan Putri.
Erigeron linifolius, Willd. (*Compositæ*).	Sari Bulan (S. Ujong).
Eriocaulon sexangulare, L. (*Eriocaulæ*).	Kumpai Bunang. Rumput Butang. R. Suasa.
E. truncatum, Ham.	Rumput Duria.
Eriodendron anfractuosum. (*Malvaceæ*).	Kabok. Kapok. Kaboh.
Erioglossum edule, Bl. (*Sapindaceæ*).	Kelat Jantan. K. Layu Hutan. Kulit Layu. Mertajam. Rambutan Hutan.
Erismanthes obliqua, Wall. (*Euphorbiaceæ*).	Kusep Kuludu. Murai Batu.
Erycibe angulata, King. (*Convolvulaceæ*).	Akar Tampang Ari. Rumput Ular Ari.
E. malaccense, Wall.	Akar Sakijang.
E. Princei, Wall.	Akar Jambol Siol. A. Ulan Jantan. Perut Kerbau. P. Kijang. Akar Sakijang.
E. sp.	Serawan.
Eryngium fœtidum, L. (*Umbelliferæ*).	Kulumbar.
Erythrina spp. (*Leguminosæ*).	Dadap. Dedap.
E. stricta, Rox.	Chengkring.
Erythroxylon burmanicum, Griff. (*Lineæ*).	Beluntas Bukit. Chinta Mula. Medang Wangi. M. Lagundi.
Eugenia acuminatissima, Kurz. (*Myrtaceæ*).	Kelat Api. K. Asam. K. Belian. K. Lapis.
E. anisosepala, Duthie	Kelat Putih Bukit.

E. aquea, Burm.	Jambu Ayer. Jambu Ayer Mawar.
E. brachiata, Rox.	Krean Lada
E. caryophylla, Wight.	Chinkeh. Chinkah. Chingke.
E. chloroleuca, Duthie	Kelat Putih. K. jantan.
E. conglomerata, Duthie.	Salembat. Sulimbat.
E. cymosa, Lam.	Kelat Jantan. K. Penaga.
E. densiflora, De C.	Kelat Putih Bukit. Jambu Ayer Mawar Autan or Hutan.
E. filiformis, Wall.	Kelat Api. K. Belian. K. Lapis. Gising. Kelat Jambu Ayer.
E. Goodenovii, King	Kelat Putih
E. grandis, Wight	Jambu Ayer Laut. K'rean Batu (Penang).
E. grata, Wall.	Gelam Tikus, (Penang).
E. Griffithii, Duthie	Kelat Bising. Medang Telor.
E. inophylla, Rox.	Samak Paya. G'lam Tikus.
E. jambolana, L.	Jambelan. Jiwat. Salam.
E. jambos, L.	Jambu Mawar.
E. lepidocarpa, Wall.	Samak Tebrau. S. Ular.
E. lineata, Bl.	Katcham (Johor) Kelat Lapis. K. Merah. K. Putih. Kelapit Nyamok. Tupo Lalat.
E. macrocarpa, Rox.	Jambu Ayer Hutan. J. Bukit. Kelat Jambu. K. Bruang.
E. claviflora, Roxb.	Bangko. Sedong.
E. malaccensis, L.	Jambu Bol. J. Susu.
E. nitida, Duthie.	Palung.
E. papillosa	Samak Bukit.
E. pendens, Duthie	Kelat Besar. Jelongong.
E. pseudosubtillis, King	Krian.
E. punctulata, King.	Kelat Penaga, Kelat Kobo. Jambu chili. Jiwat padi.
E. pustulata, Duthie.	Gelam Tikus. (Singapore).
E. pyrifolia, Wall.	Kelat Lapis. K. Putih. Samak Darat.

E. polyantha.	Kelat Merah.
E. spp.	Beti Paya. Biawak Rimbah Brac. (Johor).
E subdecussata, Wall.	Kelat Belian. K. Kobu. Samak Pulut. Kelat Asam.
E. valdevenosa, Duthie	Kelat Bunga.
E. venulosa, Wall.	Kelat Jambu Ayer. K. Putra.
E. zeylanica, L.	Beti. Merkasih. Nasi-Nasi. Kelat Nasi-Nasi.
Eugeissona triste, Griff. (*Palmeæ*).	Bertam.
Eulophia graminea, Lindl. (*Orchideæ*).	Kaling Lilin (Johor).
Euphorbia atoto, Forst. (*Euphorbiaceæ*).	Jelutong Laut (Singapore).
E. pilulifera, L.	Ambin Jantan. Ara Tanah. Kulusom. Kurumak Susu. Gelang Susu.
E. neriifolia, L.	Sudu-Sudu, Sesudu.
E. thymifolia, L.	Segan Padang.
Eurya acuminata, L. (*Ternstroemeaceæ*).	Betutu. Jirak. Bunga Kelantang. Malukut Jantan. Medang Malukut Jantan. Ranek Daun. Jirak. Maribut. Pagar Anak (Penang).
Eurycles amboinensis. (*Amaryllideæ*)	Daun Sapenoh.
Eurycoma latifolia, Jack. (*Simarubeæ*).	Bedaru Pahit. B. Putih. B. Merah. Penawar Pahit. Sempedu Pahit.
E. longifolia, Jack.	Duak. Juak. Tongkat Baginda (Penang) Lempedu Pahit. Bidara Pahit.
Eusideroxylon Schwagerii, Teysin. (*Laurineæ*).	Belian.
Euthemis leucocarpa, Jack. (*Ochnaceæ*).	Pelawan Beruk. Tambo.

Evodia latifolia, De C. (*Rutaceæ*).	Leban Pelandok. L. Nasi. L. Jantan. Pauh-Pauh Betina. Serapoh Jantan.
E. Roxburghiana, Bth.	Kiandang. Meserah Jantan. Pauh-Pauh. Pauh-Pauh Paya. Rudomo. Kayu Asam. Stengah Burong. Tengah Burong.
E. spp.	Sinintot (Johor).
Fagrœa auriculata. (*Loganiaceæ*).	Peler Musang.
F. fastigiata, Bl.	Malibera (Selangore) Malibeiro. (Malacca).
F. fragrans, Rox.	Tembusu. Tamusu.
F. Maingayii, Clarke	Lambusu.
F. morindæfolia, Bl.	Dada Kura (Selangore). Lambusu Paya. Mengkudu Badak.
F. racemosa, Jack.	Lidah Rusa. Pakan Paya. Rumpo-Rumpo. Sapuli (Pahang) Serawas. S. Paya. Suruas. Setebal. Tengok Biawak.
Ferula Narthex. (*Umbelliferæ*).	(Asafœtida) Anggu. Inggu.
Fibraurea chloroleuca, Miers. (*Menispermaceæ*).	Akar Kuning. A. Kinching Kerbau.
Ficus acamptophylla, Miq. (*Urticaceæ*).	Ara Buruteh.
F. alba, Reinw.	Ara Perak. Chumantong. (S. Ujong). Kelumpung Burong. K. Ayer. K. Jantan. Supudih Jantan.
F. altissima, Bl.	Ara Juluteh.
F. annulata, Bl.	Ara Kumbangan. A. Kubang. Kubangan.
F. aurantiaca, Griff.	Akar Pala-Pala. A. Tengok Biawak Hitam.
F. apiocarpa, Miq.	Akar Halua.

F. Benjamina, L.	Beringin. Warengin. Waringen.
F. Binnendykii, King.	Ara Akar.
F. chartacea, Wall.	Buah Sungei (Selangor). Kelumpang Mata Punai. Rami Hutan.
F. consociata, Bl.	Akar Piango Hutan. (Pahang). Getah Tahan Remba, (Malacca).
F. diversifolia, Bl.	Api Telinga Gajah.
F. dubia, Wall.	Ara Gajah. Ara Kuap.
F. glabella, Bl.	Ara Nasi.
F. globosa, Bl.	Ara Kelawak. A. Paya. Pulo Bijoh. Tuloh Bijoh.
F. indica, L.	Ara Tampo Pinang. A. Tandok.
F. microstoma, Wall.	Ara Kechil.
F. Miquelii, King.	Ara Batu. Kelumpung. K. Gajah. K. Bukit. Akar Beringen.
F. pisifera, Wall.	Ara Lidah Rimau. A. Suburuteh. A. Supude. A. Supude Paya.
F. retusa, L.	Ara Jejawi.
F. ribes, Reinw.	Alumut.
F. religiosa, L.	Bodi. Budi.
F. rhododendrifolia	Dodol. Ara Jejawi. Jawi-Jawi. Jejawi. Membatu Laiang.
F. Roxburghii, Wall.	Kelebok (Selangore).
Ficus, sp.	Akar Susu Putri.
F. subulata, Bl.	Kelumpung Agas. Lupong Merah.
F. urophylla, Wall.	Akar Buntat Ular. Supudeh. Supideh.
F. vasculosa, Wall.	Tampang Burong.
F. villosa, Bl.	Ara Akar Buloh. A. Sepadi.
F. xylophylla, Wall.	Ara Daun Lebar.

Fimbristylis asperrima, Vahl. (*Cyperaceæ*).	Rumput Bawang R. Pulut. R. Siamet.
F. diphylla, Rottb.	Rumput Peroh. R. Purun Batu.
F. globulosa, Benth.	Rumput Sandong.
F. miliacea, Benth.	Rumput Tahi Kerbau.
F. pauciflora, Benth	Rumput Girah.
Flagellaria indica, L. (*Flagellariæ*).	Rotan Ayer. R. binni.
Flemingia congesta, Rox. (*Leguminosæ*).	Seringan Jantan.
Flacourteæ cataphracta, Rox. (*Bixineæ*).	Rukam.
Fleurya interrupta, Gaud. (*Urticaceæ*).	Jelatang Ayam.
Floscopa scandens, Lour, (*Commelinaceæ*).	Kangkong Ayer.
Forrestia Griffithii, Clarke. (*Commelinaceæ*).	Setawa Jantan. S. Hutan. Sumpoh Landak.
F. mollis, Hassk.	Tawaga, (Penang).
F. spp.	Setawa. Satawa.
Freycinetia angustifolia, Bl. (*Pandaneæ*).	Nanchong Besih (Penang). Rotan Musang. Akar Ular.
Fuirena glomerata, L. (*Cyperaceæ*).	Rumput Buku Buloh. R. Kelulut. R. Lidah Menkerang.
Gahnia javanica (*Cyperaceæ*).	Serei bukit.
Galearia affinis, Bl. (*Euphorbiaceæ*).	Rambai Pontianak.
G. phlebocarpa, Br.	Rambai Daun. Ubak.
G. subulata, Muell.	Penurun Lutong. (Johore).
Garcinia Andersonii, Hk. f. (*Guttiferæ*).	Kandis Gajah.
G. atroviridis, Griff.	Asam Gelugur.
G. dulcis, Kurz.	Mundu.
G. eugeniaefolia, Wall.	Tentulang Merah.
G. Hombroniana, Prain.	Manggis Hutan.
G. Mangostana, L.	Manggis. Mustah (Legeh).

G. nigro-lineata, Bl.	Kandis Tulang-Tulang.
G. Praineana, King.	Chekow. Chupu. Cherapu.
G. Spp.	Geteh Hudang (Johore) Sirit Budak (Johore) Barus. Binkiring.
Gardenia carinata, Thw. (*Rubiaceæ*).	Randa.
G. Griffithii, Hk. f.	Champaka Hutan.
G. florida L.	Bunga Susu. Bunga China.
G. tentaculata, Hk. f.	Kachubong Paya. Kapayung Ayer.
G. tubifera, Wall.	Delima Hutan Jambu Batu Hutan. Koping Ayer (Selangor) Kapayang Ipas.
Gelonium bifarium, Rox. (*Euphorbiaceæ*).	Lampon Hitam. Limau-Limau. Ruas-Ruas.
G. multiflorum, A. Juss.	Punai Mengantok (Penang).
Geophila reniformis, Don. (*Rubiaceæ*).	Akar Pantat Beruk. Pegaga Ular. Pegaga Tikus.
Gigantochloa heterostachya, Munro.	Buloh Tilan.
G. Kurzii, Gamble.	Buluh Plang.
G. latispiculata, Munro.	Buluh Tilan Minyak.
G. Scortechinii, Gamble.	Buluh Raya.
G. Wrayii, Gamble.	Buluh Plang.
Gironniera nervosa, Bl. (*Urticaceæ*).	Ampas Tebu. Medang Ampas Tebu. M. Hitam. M. Kasap.
G. parvifolia, Pl.	Ampas Tebu. Medang Ampas Tebu. M. Kasap. Sagading.
G. subaequalis, Pl.	Medang Bulanak. M. Bulapo.
Gleichenia linearis (*Filices*).	Bengkawang, Resam. Paku Resam.
Globba spp. (*Scitamineæ*).	Haliya Hutan. Meroyan Tingal.
Glochidion brunneum, Hk. f. (*Euphorbiaceæ*).	Kenidei Paya. Ranang. Ubah Merah. U. Paya.

G. desmocarpum, Hk. f.	Ubah Hitam.
G. hirsutum, Muell.	Kornum.
G. insulare, Muell.	Terasai Manis.
G. leiostylum, Kurz.	Lunuranop. Ubah Kechil.
G. microbotrys, Hk. f.	Ubah Paya.
G. nanogynum, Hk. f.	Semak Suai.
G. obscurum, Bl.	Chermei Antan.
G. sericeum, Hk. f.	Hujan Panas puteh. Kenedei Bukit. Sindarong.
G. superbum, Baill.	Gurumong Jantan. G. Betina. Rosok Temagnu (Singapore) Timah Bangan.
Gluta elegans, Hook. f. (*Anacardiaceæ*).	Kerbau Jalang (Selangor).
Glycosmis sapindoides, Lindl. (*Rutaceæ*).	Buluntoh Burong. Cherit Morai Pulong. Simambu Hutan (Lankawi).
Gnetum Brunonianum, Griff. (*Gnetaceæ*).	Akar Dagun Putih. Ekor Balangkas. Pantat Ulat. Sugi-Sugi.
G. edule, Bl.	Blay Kechil. B. Merah.
G. funiculare, Bl.	A. Dagun. A. Mantadu. A. Putat. A. Sebuseh Paya. A. Saburus. A. Tutubo.
G. gnemon, L.	Buah Manino. (Pinang) Maningo.
G. neglectum Bl.	Akar Jullah. A. Perut Tembu. A. Sacherit Hitam. A. Seraput Jantan. Selampah (Selangor).
Gomphandra lanceolata, King.	Chemperai Batu. Lambas Gurang Jantan. Kasturi Jantan. Mungilang Api. Meruseh Hitam.
G. pinangiana, Wall.	Lempedu Jawa. Lilan Hitam.
Gomphostemma crinitum, Wall. (*Labiatæ*)	Munjulong Bukit.
Gomphia Hookeri, Pl. (*Ochnaceæ*)	Kasi (Johor) Tampoi Paya.

G. sumatrana, Pl.	Liba. Luis. Mata Ketam Batu. Murmagong. Siburu. Janggot Keli. Kelat Ampedu Jawa.
Goniothalamus giganteus, Hk. f. (*Anonaceæ*)	Galang Hutan.
G. macrophyllus, Hk. f.	Bongsoi. Sajur Wah.
G. malayanus, Hk. f.	Mupisang.
G. Prainanus, King.	Banitan.
G. sp.	Kobak Bassu.
G. Tapis, Miq.	Galai.
Goniocaryum longeracemosum, King. (*Olacineæ*)	Ruai Gajah. Sigam. Toioh (Singapore).
Gordonia excelsa, Bl. (*Ternstroemiacea*)	Pagar Anak Jantan. Kelat Assam.
Gossypium herbaceum, L. (*Malvaceæ*)	Kapas. K. Taun. K. Huma. K. Muri. K. Benggala. (Favre's names for varieties).
Gouania macrocarpa. (*Rhamneæ*)	Sibueh.
Gracilaria lichenoides, J. Ag. (*Algæ*).	Agar-Agar.
Grammatophyllum speciosum, (*Orchideæ*)	Bunga Bidadari. B. Putri.
Greenia Jackii, W. & A. (*Rubiaceæ*)	Lada Burong Besar. Landas Paya. Lundas Paya. Sikam Bulan.
Grewia fibrocarpa, Mast. (*Tiliaceæ*)	Chendrai. C. Hutan. C. Rimbah Damak. C. Asam.
G. globulifera, Mast.	Damak-Damak Buluh. Damak Merah. Sabut-Sabut.
G. laevigata, Vahl.	Sempelas Lidah Kuching.
G. Miqueliana, Kurtz.	Chenderai Paya. Malabu (Johore).
G. paniculata, Rox.	Chenderai. C. Hutan.
G. umbellata, L.	Chenderai. Akar Sekapu. A. Kapialu. Sempelas Lidah Kuching. (S. Ujong)

	Tongkat Ali.
Guilandina bonduc, L. ... (*Leguminosæ*)	Bondok. Akar Kilichi
Gymnema acuminatum, Wall. ... (*Asclepiadeæ*)	Akar Sibueh Api.
Gymnopetalum cochinchinense, (*Cucurbitaceæ*)	Sipam (Lankawi).
Gynocthodes coriacea, Miq. ... (*Rubiaceæ*)	Akar Lempedu Tanah. Akar Mali.
G. sublanceolata, Miq. ...	Akar Lampai Hitam (Malacca).
Gynotroches axillaris, Miq. ...	Janggut Keli. Mata Keli Membuluh. M. Kechil.
Gynura sarmentosa, Dec. ... (*Compositæ*)	Akar Sabiak.
Haemaria discolor, Lindl. ... (*Orchideæ*)	Baldu Merah. Daun Lau.
Haeteria obliqua, Bl. ... ... (*Orchideæ*)	Tumbah Hutan.
Harmandia Kunstleri, King. ... (*Olacineæ*)	Mempudu Tanah.
Hedychium longicornutum, Hk.f. (*Scitamineæ*)	Ubat Chaching.
Hedyotis auricularia, L. ... (*Rubiaceæ*)	Kenikah Batu. Kerukoh Batu.
H. capitellata, Wall.	Anga Besi. Keminyan Hantu. Akar Lidah Jin. Sampu Keladi. Sutnibut. Keresek Pisang (Selangor).
H. congesta, Br.	Lidah Jin, Sampu Puchut (Malacca).
H. glabra, Br.	Rumput Chenkring. R. Chinkering. R. Sebueh Jantan. R. Sipitum (Pahang). R. Srigala.
H. pinifolia, Wall.	Rumput Biring.
H. vestita, Br.	Limgugat. Tokong Balu.
Helicia attenuata, Bl. ... ... (*Proteaceæ*).	Golang Paya. Gurang Bukit.

H. excelsa, Bl.	Mata Kaok. Medang Obu.
H. petiolaris, Benth.	Gong (Johore).
H. robusta, Wall.	Medang Keladi. M. Laiang. Putat Paya. P. Tepi.
Helicteres isora, L. (*Sterculiaceæ*).	Chabei Pintal. C. Tali (Singapore). Kayu Ulas.
Heliotropium indicum, L. (*Boragineæ*).	Rumput Olek. Seri Bumi.
Hemigraphis affinis, Nees. (*Acanthaceæ*).	Langundi Pasir.
H. confinis, Ander.	Dilam. Nilam Jantan. Ruku Jantan.
Hemigyrosa longifolia, Heirn. (*Sapindaceæ*).	Penupoh.
Henslovia Lobbiana, A. D. C. (*Santalaceæ*).	Api-Api. Benalu. Bendalu-Bendalu. Benelu. Akar Satubal. A. Sumpah-Ulat. Telingan Kra.
Heptapleurum heterophyllum, Seem. (*Araliaceæ*).	Akar Chabang Lima.
H. subulatum, Seem.	Kayu Mentas. Kukau. Akar Pusat Budak.
H. venulosa, Seem.	Sepuku. Teluta Jantan.
Hernandia sonora, L. (*Laurineæ*).	Buah Keras Laut.
Herpestes monniera, L. (*Scropularineæ*).	Bremi.
Heriteria littoralis, L. (*Sterculiaceæ*)	Atun Laut. Bayur Laut. Dungun. Peler Kambing.
Heynea trijuga, Rox. (*Meliaceæ*).	Duak. Juak.
Hibiscus abelmoschus, L. (*Malvaceæ*).	Kapas Hantu. K. Hutan.
H. esculentus, L.	Kachang Bendi. K. Lindir.
H. floccosus, Mast.	Kapas Kapas (Malacca). Petutu. Unchang (P. W.)
H. macrophyllus, Rox.	Tutok.
H. mutabilis, L.	Baru Landak.

H. rosa-sinensis, L.	Bunga Raya.
H. surattensis, L.	Asam Susor.
H. tiliaceus, L.	Baru. Ambaru. Waru. Baru Laut. Dedap Laut.
Hippocratea Cumingi, Laws.	Gambir Ayer.
(*Malpighiaceæ*). Hiptage sericea, Hk. f.	Akar Dedalu Bukit (Malacca). A. Kirai. A. Kulupus. A. Papina. Sarunchi (Johore).
Hodgsonia heteroclita, Hk. f. (*Cucurbitaceæ*).	Akar Papayong.
Homalium propinquum, Clarke.	Pantat Ulat Putih.
Homalium foetidum, Benth.	Ayer Anjing. Mensara Puteh (Johore).
H. frutescens, King	Anjing Ayer.
H. grandiflorum. Benth.	Kayu Batu.
H. longifolium, Benth.	Panasan. Pauh Kijang Jantan.
H. Griffithianum, Kurz.	Lagundi Laut (Kedah).
Homalomena coerulescens, Jungh. (*Aroideæ*).	Keladi Moyiang. Kemoyang. Kelamoyiang.
Homalomena rostrata, Griff. (*Aroideæ*).	Keladi Moyang. Kemoyang. Kelamoyiang. Lumbah Paya.
H. velutina, Hk. f.	Puah Bukit.
Homalanthus populifolius, Gray (*Euphorbiaceæ*).	Ludai Padi. Moya (S. Ujong). Mahang Makan Pelandok.
Hopea globosa, Brandis. (*Dipterocarpeæ*).	Damar Mata Kuching (Perak).
H. Griffithiana, Dyer	Meranti Puteh.
H. intermedia, King	Jangkang (Penang). Meranti (Johore). Merawan. M. Kunyit. Mengarawan
H. Mengarawan, Bl.	Merawan. M. Kunyit. Jangel.
Hoya caudata, Hk. f. (*Asclepiadeæ*).	Akar Supah.

H. coronaria, Bl.	Akar Setebal.
H. diversifolia, Bl.	Akar Sarapat. Susudu Bukit.
Hullettia dumosa, King (*Urticaceæ*).	Sunto Bukit.
Hunteria corymbosa, Rox. (*Apocynaceæ*).	Gading (Penang).
Hydnocarpus castaneus, Hk. f. (*Bixineæ*).	Alai Batu.
H. sp.	Akar Keranji.
Hydnophytum formicarium, Jack. (*Rubiaceæ*).	Kepala Berok. Padal Itek. Senala Api Laut.
Hydrocera triflora, W. & A. (*Geraniaceæ*).	Inai Paya. Tampinah.
Hydrocotyle asiatica, L. (*Umbelliferæ*).	Pegaga.
Hygrophila salicifolia, Nees. (*Acanthaceæ*).	Chukal (Malacca). Kurumak Rusa. Maman Babi.
Hygrophora punicea, Fr. (*Fungi*).	Chendawan Telinga Tiong.
Hyptis brevipes, Poir. (*Labiatæ*).	Sari Ingank. S. Hutan. S. Enggang.
H. suaveolens, Poir.	Malbar Hutan. Sapulut (Singapore). Selasih Hutan.
Iguanaur polymorpha, Becc. (*Palmeæ*).	Kelasak. Sapidan.
I. sp.	Teruno.
Ilex cymosa, Bl. (*Ilicineæ*).	Musirah Bukit. M. Putih. Timah-Timah. Titimah.
I. macrophylla, Wall.	Medang Tulok (Pinang). Timah-Timah Bulan. T. Gading.
Illicum anisatum, L. (*Magnoliaceæ*).	(Aniseed). Adas Manis.
Illigera appendiculata, Bl. (*Combretaceæ*).	Maralapit.
Impatiens Griffithii, Hk. f. (*Geraniaceæ*).	Inai Bukit.

Imperata cylindrica, Beauv. (*Gramineæ*).	Lalang.
I. exaltata, Brngn.	Lalang Jawa.
Indigofera tinctoria, L. (*Leguminosæ*).	Nila. Tarum.
Inocarpus edule, Forst. (*Leguminosæ*).	Gayam.
Iodes velutina, King (*Olacineæ*).	Akar China Bukit. A Sulupit.
Ipomœa angustifolia, Jacq. (*Convolvulaceæ*).	Kangkong Pasir. Akar Kurumak.
I. aquatica, Forst.	Kangkong.
I. cymosa, Roem.	Akar Ulan.
I. digitata, L.	Kangkong Laut. Akar Lana (Penang).
I. peltata, Miq.	Kangkong Bukit. Ulam Gajah.
I. pes-capræ, Roth.	Tapak Kuda.
I. uniflora, R. & S.	Lidah Patong. Ulam Putih.
I. quamoclit, L.	Bunga Jawa.
Irvingia malayana, Hk. f. (*Simarubeæ*).	Pauh Kijang. Merlang.
Ischaemum muticum, L. (*Gramineæ*).	Rumput Ekor Chari. R. Tembaga.
Ixonanthes icosandra, Jack. (*Lineæ*).	Langgundi Bunga. Buah Tui.
I. obovata, Hk. f.	Pagar Anak. P. A. Merah. P. A. Hitam. P. A. Betina. Sankau Merah.
I. reticulata, Jack.	Jinjagong. Sakit Hudang (Malacca). Pagar Anak.
Ixora amœna, Wall. (*Rubiaceæ*).	Siantan Jantan. S. Hutan.
Ixora coccinea, Br.	Jarum-Jarum Merah.
I. fulgens, Roxb.	Kramat Hujan. Pechah Priok.
I. grandiflora, Zoll.	Sampu Tikus, Segading Jantan, Trubol.
I. nigricans, Br.	Supati

I. opaca, Br.	Jambol Siol. Mumjilai Hutan.
I. parviflora, Vahl.	Kelat Tandok. Kupayiang Ayer. Padijang.
I. pendula, Jack.	Saratong Padi (Johore). Tabong Bunga.
I. spp. cultivated forms	Bunga China.
Jackia ornata, Wall. (*Rubiaceæ*).	Sintulang.
Jasminum bifarium, Wall. (*Oleaceæ*).	Kukulang Paya. Pakan. Hutan. P. Jantan. P. Betina. Sumpoh. Pukan.
J. Griffithii, Clarke	Kumkumah Hutan. Akar Melor Hutan.
J. Sambac, Ait.	Melati. Malati. Malor. Melor.
J. smilacifolium, Griff.	Kenching Kambing. Akar Lumut Sial Munahon.
Jatropha curcas, L. (*Euphorbiaceæ*).	Jarak Blanda.
Jussieua suffruticosa, L. (*Onagraceæ*).	Bujang Semalam. Lakom Ayer. Pujong Malam.
Justicia gandarusa, L. (*Acanthaceæ*).	Gandarusa. Gendarusa. Kisi-Kisi (Selangore).
J. sp.	Sibiak (Malacca).
Kœmpferia Galanga, L. (*Scitamineæ*).	Chekur. Kenchur.
Kayea ferruginea, Pierre (*Guttiferæ*).	Sumbawang.
K. grandis, King	Bunuai. Penaga Paya.
Kibara coriacea, Endl. (*Monimiaceæ*).	Kutang tandok. Pakan Jantan. Setubah Paya.
Kibessa galeata, Cogn. (*Melastomaceæ*).	Lagis Hutan Pukua.
K. simplex, Korth.	Kelat Menaun. Mahubi. Munahon. Menaun. Sial Menaun. Sangkap Jantan. Sigumbong Paya. Srian-Putih. Naun.
Kopsia sp. (*Apocynaceæ*).	Bangku.

Kurrimia paniculata, Wall. (*Celastrineæ*).	Benak. Biko-Biko. Bunak.
K. pulcherrima	Boko-Boko. Medang Gidap.
Kyllingia brevifolia, Rottb. (*Cyperaceæ*).	Rumput Kanching Baju Hutan.
K. monocephala, Vahl.	Rumput Tuki.
Labisia pothoina, Lind. (*Myrsineæ*).	Berangkas Hutan. Mata Plandok Rimbah.
Lagenaria vulgaris, Ser. (*Cucurbitaceæ*).	Labu Jantong. L. Ayer Putih. L. Kendi.
Lagerstrœmia floribunda, Jack. (*Lythraceæ*).	Bongok. Bongor. Bongoh.
L. Flos-Regina, Retz.	Bongok Raya. Sebugo.
L. hexaptera, Miq.	Bongok Balong. Mapot (Malacca).
L. sp.	Bongkok Malukut.
L. sp.	Bongkok Susor.
Lasia spinosa, Thw. (*Aroideæ*).	Gli-Gli. Bekil.
Lansium domesticum, Jack.	Langsat. Langsad. Lansat. Lansah.
var. Duku. (*Meliaceæ*).	Duku.
Lantana Camara, L. (*Verbenaceæ*).	Bunga Pagar. Tahi Ayam.
Laportea crenulata, Forst. (*Urticaceæ*).	Jelatang. Daun Gatal. Rumpai.
Lasianthus adpressus, Hk. f. (*Rubiaceæ*).	Sebong Hutan.
L. Jackianus, Hk. f.	Ayam-Ayam.
L. sp.	Binchi.
L. sp.	Meroyan Batu.
L. sps.	Jarka. Lankam.
L. Wallichii, Wight.	Buah Chabang Baju.
L. Wightianus, Hk. f.	Buntat Bahong. Daun Sekuntot.
Lawsonia alba, Lam. (*Lythraceæ*).	Hina. Hinai. Inai.

Lecananthus erubescens, Jack. (*Rubiaceæ*).	Ambun Akar. Akar Dato Rajah (Johore). Akar Susor Paya (Malacca).
Leea æquatica, L. (*Ampelideæ*).	Jolok-Jolok.
L. gigantea, Griff.	Gireng.
Leea sambucina, Willd. (*Ampelideæ*).	Jarak Laut. Jolok-Jolok. Tumbo Daun Bukit.
L. sp.	Toi.
Lentinus exilis (*Fungi*).	Chendawang Batang.
Leonurus sibiricus, L. (*Labiatæ*).	Tebing Aga, Seranting.
Lepidagathis hyalina, Nees. (*Acanthaceæ*).	Kuntul Rimbah.
L. longifolia, Wight.	Peluroh. Serga. Seruntu.
Leptaspis urceolata, Br. (*Gramineæ*).	Tampo Kulang. Getah Puyuh. T. Gulang. Glang.
Leptonychia glabra, Willd. (*Sterculiaceæ*).	Tingao.
Leptospermum amboinense, Bl. (*Myrtaceæ*).	Gelam Bukit.
Lettsomia Maingayi, Clarke (*Convolvulaceæ*).	Akar Butang Bunga. A. Kelupos. A. Sumulut. A. Sumuntat. Tentarong Terong-Terong.
L. peguense, Clarke	Akar Tapak Rusa. A. Tumiang. A. Ulan Bukit.
L. rubicunda, Clarke	Akar Saga Moleh.
Leucas zeylanica, Br. (*Labiatæ*).	Katumbit.
Leuconotis eugeniæfolia, De C. (*Apocynaceæ*).	Akar Garah. A. Gegrip Sundek.
Leucopogon Malayanus, Jack. (*Apocynaceæ*).	Mentada.
Leucostegia parvula, Wall. (*Filices*).	Paku Lumut Batu
Licuala acutifida, Mart. (*Palmeæ*).	Palas Tikus.

L. glabra, Griff.	Palas Padi. P. Gunong.
L. longipes, Griff.	Palas Batu.
L. paludosa, Griff.	Palas.
L. pusilla, Becc.	Gurcheng. Palas Rewang.
Limacia cuspidata, Hk. f. ... (*Menispermaceæ*).	Akar Minyak.
L. oblonga, Miers.	Akar China.
L. triandra, Miers.	Akar Kunyit-Kunyit. A. Kusin.
Limnophila conferta, Benth. ... (*Scrophularineæ*).	Bremi Hutan.
Limnophila villosa, Benth. ... (*Scrophularineæ*).	Kerak Nasi Putih. Sabueh Batu. Sibueh Batu.
Lindera malaccensis, Hk. f. ... (*Laurineæ*).	Medang Paya Serapu Putih.
L. sp.	Medang Perauas.
Lindsaya scandens, Hk. f. ... (*Filices*).	Paku Dudok Bukit
Linostoma pauciflora, Griff. ... (*Thymeleaceæ*).	Babora.
L. scandens, Griff.	Akar Kapang.
Litsea amara, Bl. ... ... (*Laurineæ*).	Medang Buluko. M. Moyang.
L. lancifolia, Rox.	Medang Kechawi. M. Tampo.
L. myristicæfolia, Wall. ...	Medang Bunga. M. Kelayer. M. Tai Ayam.
L. nitida, Rox.	Medang Kelor.
L. polyantha, Juss.	Bangang. Medang Busuk.
L. sp. near panamonja, Hamm.	Medang Katuko.
L. sp.	Bobokor (Selangor).
L. zeylanica, Nees.	Medang Saluang.
Livistona cochinchinensis, Mart. (*Palmeæ*).	Serdang.
L. Kingii, Hk. f.	Kepau (Selangor).
Luvunga scandens, Ham. ... (*Rutaceæ*).	Akar Keping (Johore).
Lophatherum gracile, Beauv. ... (*Gramineæ*).	Rumput Jarang. R. Kerubut. R. Kelurat.

Lophiocarpus guyanensis, Rich. (*Alismaceæ*).	Kelipoh Padang.
Lophopetalum fimbriatum, Wight. (*Celastrineæ*).	Krabu. Medang Asam.
L. pallidum, Laws.	Kroi.
Loranthus ampullaceus, Rox. (*Loranthaceæ*).	Dudalu. Menalu. Sanalu Api-Api Jantan.
L. crassus, Hk. f.	Benalu Api.
L. ferrugineus, Miq.	Benalu Api.
L. formosus, Bl.	Gilan (Johore).
L. grandifrons, King	Mendalu Besar.
L. pentandrus, L.	Lulor Api-Api. Sanalu Api. Sulor Api Jantan.
Loranthus pentapetalus, Rox. (*Loranthaceæ*).	Mendalu Api.
L. sps.	Api-Api.
Lowia longiflora, Scort. (*Scitamineæ*).	Lobak Hutan.
Luffa aegyptica, L. (*Cucurbitaceæ*).	Petola Manis.
L. cylindrica, Roem.	Ketola Manis.
Lumnitzera coccinea, Wight.	Api-Api.
Lycopodium cernuum (*Lycopodiaceæ*).	Rumput Sarani.
Lygodium dichotomum, (*Filices*).	Akar Sidin.
L. pinnatifidum	Akar Darai Paya. Ribu-Ribu Gajah.
L. scandens	Ribu-Ribu.
Maba buxifolia, Pers. (*Ebenaceæ*).	Kayu Arang.
Macaranga Hullettii, King (*Euphorbiaceæ*).	Mahang Bulan. M. Serendit.
M. hypoleuca, Muell.	Mahang Putih.
M. Javanica, Muell.	Mahang Bayan. M. Api. M. Lok. Selaru. Sugu-Sugu.
M. Lowii, King	Gireseh Padi. Rami Betina.

M. megalophylla, Muell.	Chia Kubit. Kubin. Kuban. Sapedas. Bank.
M. populifolia, Muell.	Balik Angin Putih. Pulau. Pipi.
M. tanarius, Muell.	Inchong (Pinang). Kundo.
M. spp.	Mahang.
(*Myrsineæ*).	
Mallotus, Caput-Medusæ, Hk. f.	Medang Jurnus.
(*Euphorbiaceæ*).	
M. cochinchinensis, Muell.	Balik Angin.
M. floribundus, Muell.	Sekubing Ayer.
M. Griffithianus, Hk. f.	Marpoh. Murpoh. Pulut-Pulut Bukit. Setampin (Selangore).
M. lancifolius, Hk. f.	Ludai Jantan. Medang Jarak.
M. macrostachys, Muell.	Balik Kuning. Duleh Merah. Berumbong.
M. penangensis, Muell.	Pulut-Pulut Poko.
M. Porterianus, Muell.	Pulut-Pulut Hutan.
M. repandus, Muell.	Akar Chiarek Putih.
M. subpeltatus, Muell.	Jarak Gajah. J. Hutan.
Mapania bancana, Miq. (*Cyperaceæ*).	Rumput Giring-Giring. R. Supidang. R. Surat Belukar.
M. humilis, Naves	Siak-Siak Rimbah.
M. hypolytroides, Clarke	Pandan Biru.
M. palustris, Benth.	Mengkuang. M. tudong. Lobo.
Mangifera coesia, Jack. (*Anacardiaceæ*).	Binjai.
M. foetida, L.	Bachang. Machang. Ambachang. Kambachang. Machang Batu.
M. indica, L.	Mampelam. Ampelam. Hampelam.
M. kemanga, Bl.	Kemanga.
M. Maingayii, Hk. f.	Sepum.

M. oblongifolium, Hk. f.	Kuwini (Maingay).
M. odorata, Griff.	Kuwini.
M. sp.	Para (Johore).
M. sp.	Bachang Hutan.
M. sp.	Kijai.
Marasmius gordipes (*Fungi*).	Chindawan Rombut Ali.
Mariscus albescens, Gaud. (*Cyperaceæ*).	Rumput Bumbut.
M. pennatus, Clarke	Rumput Sulengsin. R. Surai.
M. umbellatus, Clarke	Janggut Baong. Rumput Pinang.
Marlea ebenacea, Clarke (*Cornaceæ*).	Lidah Kerbau Putih. Lidah-Lidah Kayu. Puchut Kuning.
M. nobilis, Clarke	Sutubal.
Marumia verrucosa, Miq. (*Melastomaceæ*).	Akar Kamunting (Johore). A. Salan Hutan. A. Sendudok.
Marsdenia tinctoria, Br. (*Asclepiadeæ*).	Akar Tarum.
M. sp.	Tarumbo (Pahang).
Matthæa latifolia, Perk.	Lumso.
Medinilla Hasseltii, Bl. (*Melastomaceæ*).	Asam Lokan Putih. Lokan Putih. L. Jantan. Akar Nubal (S. Ujong).
Melanochyla auriculata, Hk. f. (*Anacardiaceæ*).	Mumpian.
M. angustifolia, Hk. f.	Rapat Bukit.
M. Maingayi, Hk. f.	Chengal Batu Bukit.
Mezzettia Herveyana, Oliv. (*Anonaceæ*).	Mengkudang.
Melaleuca leucadendron, L. (*Myrtaceæ*).	Gelam. Kayu Putih.
Melastoma malabathricum, L. (*Melastomaceæ*).	Sendudok. Sendudu. Kedudok. Birurong Hitam (Clifford). Probably not Malay.
M. decemfida, Wall.	Sendudok Putih.

Melochia corchorifolia, L. (*Sterculiaceæ*).	Lumah Ketam.
Melodinus orientalis, Bl. (*Apocynaceæ*).	Getah Ujol.
Melodorum fulgens, Hk. f. (*Anonaceæ*).	Akar Larat. A. Lerek. A. Lerit. A. Kep.
M. hypoglaucum, Hk. f.	Akar Larak Merah.
M. latifolium, Hk. f.	Akar Pisang-Pisang Buldo.
M. manubriatum, Hk. f.	Akar Jankang. A. Kenching.
M. pisocarpum, Hk. f.	Akar Jinteh.
M. prismaticum, Hk. f.	Akar Pisang-Pisang Bukit.
Meliosma nitida, Bl. (*Sabiaceæ*).	Medang Siri.
Meliosma, sp.	Medang Berhulu.
M. sp.	Mengading.
Melothria affinis, King. (*Cucurbitaceæ*).	Akar Kundor Tikus.
M. marginata	Timun Tikus.
M. sp.	Akar Muntinum Pipit.
Memecylon acuminatum, Sm. (*Melastomaceæ*).	Magas.
M. caloneuron, Miq.	Kayu kapas. Api-Api Bukit.
M. coeruleum, Jack.	Api-Api Hutan. Dalek Jambu. Pantat Ulat. (Malacca). Sinonia.
M. edule, Rox.	Dalek Ayer. Dulek Putih.
M. garcinioides, Bl.	Bangas. Jenitan. Liis. Bangas Merah.
M. heteropleurum, Bl.	Jambu Baning. Kuku Baning.
M. Hulletti, King	Jambu Kalada.
M. lævigatum, Bl.	Dalek Tembaga.
M. multiflorum King.	Kuku Baning.
M. myrsinoides, Bl.	Bala. Dalek Putih. Kuku Baning. Kayu Nipis Kulit.
M. oleæfolium, Bl.	Dulek Putih.
M. oligoneuron, Miq.	Sial Munahon.
M. dichotomum, Clarke	Dalek Ayer. Delima Burong. Bagas Putih.

M. spp.	Dalek. Delek. Delak.
Mezoneuron sumatranum, Wall. (*Leguminosæ*).	Akar Darah Blut. A. Kelechi Remba.
M. leptopoda, Oliv.	Perah.
Melanorrhea Curtisii, Oliv. (*Anacardiaceæ*).	Rengas. Merah, Kluang.
M. Wallichii, Hk. f.	Rengas. R. Manau.
Mesua ferrea, L. (*Guttiferæ*).	Matopus (Penang) Penaga Kunyit. P. Lilin. P. Putih. P. Saga. Tapis.
M. lepidota	Jambu Dulek.
Michelia champaca, L. (*Magnoliaceæ*).	Champaka. Chempaka.
Microdesmis casearifolia, Pl. (*Euphorbiaceæ*).	Buah Chatang. Kenidei Badak.
Micromelum hirsutum, Oliv. (*Rutaceæ*).	Chenana (Pahang).
Micromelum pubescens, Bl.	Cherek Putih. Kurnan. Saga Kayu. Titimah Betina (Malacca).
Micropora Curtisii, Hk. f. (*Laurineæ*).	Medang Kaki Liong. M. Salayun. M. Tuloh. M. Tandok (Pahang).
Microstemon velutinum, Engl. (*Anacardiaceæ*).	Shinghe.
Microstylis congesta, Lindl. (*Orchideæ*).	Sigundo Hutan.
Mikania scandens, Vahl. (*Compositæ*).	Akar Ulam Tikus. A. Churoma. A. Lupang.
Millettia atropurpurea, Benth. (*Leguminosæ*).	Tulang Dang. Chicha. Girah Paya.
M. eriantha, Benth.	Akar Koyah. A. Kuaya. A. Kuayah. A. Pera.
M. sericea, W. & A.	Akar Nambu Jantan. A. Mumbol (Malacca).
Miquelia caudata, King. (*Olacineæ*).	Selowung.
Mimosa pudica, L. (*Leguminosæ*).	Samalu (Singapore).

Mimusops elengi, L. (*Sapotaceæ*).	Bunga Tanjong.
Mitragyne speciosa, Korth. (*Rubiaceæ*).	Biak.
Mitrephora macrophylla, Oliv. (*Anonaceæ*).	Prusat.
M. Maingayii, Hk. f.	Maribut Daun Besar (Penang).
M. reticulata, Hk. f.	Ringei-jerenang.
Metroxylon Rumphii, Mart. and M. Sagus. (*Palmeæ*).	Sagu. Rembia. Gumbia. Gombir
Modecca singaporiana, Mast. (*Passifloreæ*).	Akar Gelumpong. A. Lupok. A. Lempedu Gajah. A. Laut. A. Merapoh. Kulipunang (S. Ujong).
Moesa ramentacea, ADC. (*Myrsineæ*).	Akar Mumbolah. Bakaras. Gegambir Jantan. Kampor. Selutang (Johore). Tulang Hutan. Belangkas Hutan.
M. Indica, L.	Kasih Hutan.
Mollugo stricta, L. (*Ficoideæ*).	Rumput Belangkas.
Monochoria hastaefolia, L. (*Pontederiaceæ*).	Chachang Layer.
Morinda citrifolia, L. (*Rubiaceæ*).	Mengkudu Jantan.
M. rigida, Miq.	Lumbu Jawa.
M. sarmentosa, Bl.	Buku Bemban.
M. tinctoria, Rox.	Mengkudu. Mangkudu. Bangkudu. Changkudu.
M. umbellata, L.	Mengkudu Kechil. Buah Butang.
Mormodica charantia, L. (*Cucurbitaceæ*).	Peria Laut.
Moringa pterygosperma, L. (*Moringeæ*).	Ramunggai. Kelor. Kachang Kelor. Kelu.
Mucuna pruriens, De C. (*Leguminosæ*).	Kachang Karkaras Gatal Kachang Babi.

Murraya exotica, L. (*Rutaceæ*).	Kamuning.
Musa malaccensis, Ridl. (*Scitamineæ*).	Pisang Karok.
Musa sapentium, L.	Pisang.
Mussaenda glabra, Vahl. (*Rubiaceae*).	Daun Petri (Favre). Balik Adap.
M. variabilis, Hems.	Balik Adap Bukit. Akar Bintang Merah. A. Bunga Bintang Kuning.
M. villosa, Wall.	Adap-Adap. Balik Adap.
Mussaendopsis Beccariana, Baill.	Selumar.
Myrialepis Scortechinii, Hk. f. (*Palmeæ*).	Rotan Gajah. R. Kirtong.
Myrica naga, L. (*Myricaceæ*).	Gelenchak. Kayteng. Kusami.
Myrsine capitellata, Wall. (*Myrsineæ*).	Kicher-Kicher.
Myristica Colletiana, King (*Myristicaceæ*).	Kayu Jermal. Pendara Paya.
M. crassa, King.	Pala Bukit.
M. crassifolia, Hk. f.	Pala Jantan Paya.
M. Curtisii, King	Pandarahan Bukit.
M. conferta, Bl.	Penara Bukit.
M. elliptica, Wall.	Pala Hutan. Sunkit.
M. Farquhariana, Wall.	Leleong Merah. Maralak. Masalak.
M. fragrans, L.	Pala.
M. geminata, King	Enggank. Ingank.
M. glaucescens, Hk. f.	Chindarah Laut. Pendarah Laut. Singga Putih.
M. globularia, King	Kadanga Hutan Hitam.
M. Griffithii, Hook. f.	Ampas Tebu.
M. Hookeriana, Wall.	Rengas Daun Besar. Ahtcho.
M. intermedia, Bl.	Medang Paya. Pendara Kikeh.
Myristica Irya, Gaertn.	Lempoyan Paya. Lumpoyan Paya.
M. Kunstleri, King	Pala Bukit.

M. Lowiana, King	Pala Hutan Bulu.
M. laurinum, Bl.	Kamarahan. Kerantu. Tenol. Mumpisang Bulu.
M. Maingayi, Hk. f.	Chenderahan. Penarahan.
M. missionis, Will.	Chendarah Padi. Merbulu Kechil. Pendarah Padi.
M. oblongifolia, King	Pendara Hitam.
M. paludicola, King	Jankang Jaya.
M. polyspherula, Hk. f.	Jankang Bukit. Pandara. Hijau.
M. Ridleyana, King	Piango Jantan.
M. Scortechinii, King	Penara Batu.
M. superba, Hk. f.	Pendarah. Penarah. Menarah.
M. sp.	Chindarah.
M. sp.	Penaga Lilin. (Malacca).
M. sp. Nr. polyspherula	Tebuang Blang.
Myrmecodia echinata, Gaud. (*Rubiaceæ*).	Perutak. Priok Hantu. Samboko.
Myxopyrum nervosum, Bl. (*Oleaceæ*).	Akar Dudaro. A. Kulawi.
Nauclea, sp. (*Rubiaceæ*).	Pulasan Hutan. Timbang Dayong. Mumpoyan. Mupayian Kelimpayan.
Nelumbium speciosum, Willd. (*Nympheaceæ*).	Saroja. Seroja. Seratei.
Nenga Wendlandiana, Scheff. (*Palmeæ*).	Pinang Umu.
Nepenthes gracilis, Korth. (*Nepenthaceæ*).	Kanchong Kerah. Priok Kerah.
N. sps.	Priok Kerah.
Nephelium costatum, Hiern. (*Sapindaceæ*).	Rambutan Passeh.
N. eriopetala, Miq.	Gumpo. Sanggol Lubong.
N. Litchii, Camb.	Lichi. Kelingking (Favre).
N. lappaceum, L.	Rambutan.
N. Maingayi, Hiern.	Ridan.
N. malaiense, Griff.	Mata Kuching.
N. mutabile, Bl.	Pulasan.

Nephrodium dissectum, Forst. (*Filices*).	Paku Kilat.
Neprolepis exaltata, L. (*Filices*).	Paku Uban.
Nerium oleander, L. (*Apocynaceæ*).	Bunga Anis. B. Japun.
Neuropeltis racemosa, Wall. (*Convolvulaceæ*).	Akar China Putih. Bunga Junkal. Akar Oran Merah (Malacca).
Nigella sativa, L. (*Ranunculaceæ*).	Jintan Hitam (imported).
Nipa fruticans, L. (*Palmeæ*).	Nipah.
Nicolaia imperialis, Horan. (*Scitamineæ*).	Kantan.
Norrisia malaccensis, Hk. f. (*Loganiaceæ*).	Jangkot. Kakaras. Saropok. Serupah Bukit.
Nymphea stellata, L. (*Nympheaceæ*).	Ati-Ati Paya. Kelipoh. Teratei Kechil.
Oberonia anceps, Lindl. (*Orchideæ*).	Sakat Lidah Buaya (Malacca).
O. stenophylla, Ridl.	Nibong Palir (Johore).
Ochlandra Ridleyi, Gamble (*Gramineæ*).	Buluh Kasap.
Ochanostachys amentacea, Mast. (*Olacineæ*).	Petaling.
Ochthocharis borneensis, Miq. (*Melastomaceæ*).	Sakalan (Johore).
O. javanica, Bl.	Silokan (Singapore).
Ocymum basilicum, L. (*Labiateæ*).	Selasih Antan.
Olax imbricata, Rox. (*Olacineæ*).	Maribut (Kedah).
Oldenlandia diffusa (*Rubiaceæ*).	Rumput Jingah.
O. corymbosa, Heyne	Tulo Belankas.
Oncosperma horrida (*Palmeæ*).	Bayas.
O. sp.	Nibong Padi. N. Linau

O. tigillaria, Jack.	Nibong. Anibong.
Ophiorrhiza, sps. (*Rubiaceæ*).	Changkoi Bahang. Kudumak. Sambu Badak. Sumpuh Badak.
Orania macrocladus, Mart. (*Palmeæ*).	Ibul.
Oroxylon indicum, Vent. (*Bignoniaceæ*).	Bulai.
Orthosiphon stamineus, Benth. (*Labiatæ*).	Kumis Kuching.
Ormosia venosa, Baker (*Leguminosæ*).	Suga.
Osmelia Maingayi, King (*Samydaceæ*).	Chindarong Bukit. Bangas Merah. Medang Kemantow.
Ostodes macrophylla, Benth. (*Euphorbiaceæ*).	Chendarah Hantu. Chungah Putih. Dada Ruan. Julong Jantan. J. Putih. Kasumbo Jantan. Kayu Katu. Kasumbo Jantan Lalantar (Malacca). Langkuang. Sumpuyan Ular.
Oxymitra biglandulosa, Scheff. (*Anonaceæ*).	Akar Mupisang Hitam.
O. sp.	Lingkean.
Oxytenanthera sinuata, Gamble (*Gramineæ*).	Buluh Minyak.
Pachynocarpus Wallichii, King (*Dipterocarpeæ*).	Damar Mata Kuching. Merbatu Pasir. Petaling Ayer.
Pachyrrhizus angulatus, Rich. (*Leguminosæ*).	Kachang Bengkuang. K. Sengkuang.
Pæderia foetida, L. (*Rubiaceæ*).	Akar Sekuntut. Dandangking (Johore).
Pancratium Zeylanicum, L. (*Amaryllideæ*).	Bramban Hutan.
Pandanus atrocarpus, Griff. (*Pandanaceæ*).	Mengkuang.
P. fascicularis Lam.	Mengkuang Laut. Pandan duri. P. laut. P. Darat

P. Houlletiana, Carr	Mengkuang Hutan.
P. inermis	Pudak (Favre).
P. ovatus, Kurz.	Pandan Tikus. P. Beduri.
P. lævis, Rumph.	Pandan Jelinkeh.
P. helicopus, Kurz.	Pandan Resau. P. Rasow.
P. sp. near helicopus	Pandan Telongkat (Selangor).
P. parvus, Ridl.	Pandan Kura.
P. sp. n. aff. ovatus	Silangsang. Sendayan Masing.
Pangium edule, Reinwdt. (*Bixineæ*).	Payung. Kapayung.
Panicum auritum, Prest. (*Gramineæ*).	Rumput Kumpai. Gumpai (Johore).
P. colonum, L.	Rumput Kusa-Kusa. R. Padi Burong.
P. indicum, L.	Rumput Bidis. R. Bonto Darat.
P. italicum, L.	Rumput Sekoyi.
P. myosuroides, Br.	R. Kumani.
P. myurus, H. B. K.	R. Kumpai.
P. nodosum, L.	R. Sarang Buaya.
P. radicans, L.	R. Telor Ikan. R. Upat.
Panicum sarmentosum, Rox.	Rumput Janggut Ali. R. Tongkat Ali. R. Kulubong.
P. trigonum, Retz.	R. Kurubong Padi. R. Mutubong.
Paramignya longispina, Hk. f. (*Rutaceæ*).	Limau Lelang.
P. monophylla, Wight.	Akar Merlimau.
Parameria glandulifera, Hk. f. (*Apocynaceæ*).	Akar Serau.
P. polyneura, Hk. f.	Akar Sedang. A. Serapat.
Parastemon urophyllum, De C. (*Rosaceæ*).	Siagnos Betina. Malas. Kelat Pasir.
Parinarium Griffithianum, Hk. f. (*Rosaceæ*).	Merbatu Loyang. Chana. Mujagon. Sauh Hutan. Sunko Rimau.

P. costatum, Hk. f.	Poko Obi. Sukupa.
P. nitidum, Hk. f.	Bangas Putih. Kelat Layu Hutan. Medang Kawan. Merbatu Kechil. M. Merah. M. Putih. Mumbatu. Marabatu. Tumbatu. Mumpadang.
Parkia biglandulosa. W. & A. (*Leguminosæ*).	Petai.
P. Roxburghii, Don.	Petai. Beka. Bôli. Gudayang Kedawang. Kerayang. Gudawang. Kerayong (Selangor). Kurayong.
Passiflora foetida, L. (*Passifloreæ*).	Letop-Letop (Malacca). Timun Dindang. T. Padang.
Paspalum scrobiculatum, L. (*Gramineæ*).	Rumput Hijau. R. Julong- R. Liku. R. Tulo Sintadok.
Pavetta humilis, Hk. f. (*Rubiaceæ*).	Jarum-Jarum Batu.
Pavetta indica, L.	Gading Hutan. Jarum. Jarum-Jarum. J. Paya. Jejarum. Menjarum. Pecha. Priok Putih. Serau Lipis. Surungko.
Payena costata, King (*Sapotaceæ*).	Niato. N. Tembaga. N. Balau. N. Putih. N. Hitam. Munglut. Perut Pelandok. Samaram.
P. Leerii, Oliv.	Getah Sundik. Sundek.
P. Maingayi, C. B. C.	Getah Percha Burong.
P. quadrangularis, L.	Timun Hutan.
Peliosanthes albida, Hk. f.	Pinang Lumbah. Suludang Pinang, Tukus Tikus.
P. spp.	Lumbah Bukit.
Pellionia Duvauana N. E. Br. (*Urticaceæ*).	Akar Siak Naga.
P. javanica, Wedd.	Chambai Batu.
Peltophorum dasyrrachis, Kz. (*Leguminosæ*).	Alai. Batai.

Pellacalyx saccardianus, Scort. (*Rhizophoreæ*).	Kayu Johore. Mumbuloh Rimbah. Piango Jantan
Pentace eximia, King (*Tiliaceæ*).	Medang Lusa.
P. triptera, Mast.	Medang Serai Johore. Kabal Ayam. Sepa Putri S. Petri.
Pentacme malayana, King (*Dipterocarpeæ*).	Timah Batu.
Pentaphragma begoniæfolia, Wall. (*Campanulaceæ*).	Balong Ayam Batu.
Pentasacme caudata, Wall. (*Asclepiadeæ*).	Chermin Batu (Pahang).
Pergularia minor, Andr. (*Asclepiadeæ*).	Bunga Tongkin.
P. odoratissima, L.	Malati Tongking.
Peristrophe acuminata, Nees. (*Acanthaceæ*).	Rumput Lidah Jin.
P. montana, Nees.	Noja.
Pericampylus incana, Miers. (*Menispermaceæ*).	Gasing-Gasing. Gegasing. Jerkasing. Kelesu (Penang).
Perotis latifolia (*Gramineæ*).	Rumput Ekor Kuching.
Petunga sp. (*Rubiaceæ*).	Tulang Betina.
P. venulosa, Hk. f.	Mempas Jantan. Peluk Hantu. Pulas Hantu. Umpaong Hantu. Gading Lambai.
Phaseolus lunatus, L. (*Leguminosæ*).	Kachang China (Favre). K. Serinding.
P. mungo, L.	Kachang Chindai. K. Hijau. K. Kechil. Keddi. Kedeli.
P. vulgaris, L.	Kachang Bunche. K. Pendek.
Phaeanthus nutans, Hk. f. (*Anonaceæ*).	Pisang-Pisang Bukit. P. P. Kechil. P. P. Paya.

Phoebe multiflora, Bl. (*Laurineæ*).	Medang Ketanah. M. Merah (Malacca). M. Pasir.
P. sp.	Medang Burong (Johore).
P. sp.	Medang Kasiri. Kusirai.
P. sp.	Silincha (Johore).
Phyllanthus distichus, Muell. (*Euphorbiaceæ*).	Chermei. Chermela. Chamin.
P. frondosus, Wall.	Cherek Hantu.
P. pectinatus, Hk. f.	Laka-Laka. Malaka.
P. pulcher, L.	Kanka Bona.
P. urinarius, L.	Ambelan Buah. Ambin Buah
Phyllagathis rotundifolia, Bl. (*Melastomaceæ*).	Banau Hutan. Bawal Hutan.
Philydrum lanuginosum, Br. (*Philydraceæ*).	Kepas. Kipas.
Phyllochlamys spinosa, Bureau. (*Urticaceæ*).	Supucha.
P. Wallichii, King	Gambadak (Kedah).
Physalis minima, L. (*Solanaceæ*).	Chipluan.
Phragmitis Roxburghii, Steud. (*Gramineæ*).	Gudabong
Phrynium hirtum, Ridl. (*Scitamineæ*).	Lerak Betina.
Ph. Griffithii, Baker, and	
Ph. Malaccense, Ridl.	Lerek. Lerit.
P. Jagoranum, Koch.	Lerit Padi (Selangor).
Physostelma Wallichii, Wight. (*Asclepiadeæ*).	Akar Siak.
Phytocrene palmata, Wall. (*Olacineæ*).	Akar Pisang-Pisang Buloh.
Pimelandra Wallichii, A. De. (*Myrsineæ*).	Layan. Medang Katanah. M. Merah (Malacca). M. Pasir. Tambang Sisir.
Pimpinella anisum, L. (*Umbelliferæ*).	Jintan Manis. (Imported).
Pinanga disticha, Bl. (*Palmeæ*).	Pinang Boring Padi. P. Legong (Pahang).

P. malayana, Scheff.	Pinang Boring. P. Dampong.
P. polymorpha, Becc.	Pinang Kaki Pelandok.
P. Scortechinii, Becc.	Bayas Betina.
Piper caninum, L. (*Piperaceæ*).	Chabai Hutan. Akar Kalong. Lada Hantu. L. Anjing.
P. chaba, Hunter	Bakek. Lada China.
P. cubeba, L.	Kumukus (Singapore). Lada Ekor. L. Berekor.
P. Betel, L.	Sirih. S. Malayu. S. China.
P. lonchitis, R. & Sch.	Lada Antan.
P. longum, L.	Chabei. Kadok.
	Kadok. Kadanok. Kudak (Pinang). Keduk (Favre).
P. muricatum, Miq.	Kerubut Paya.
P. nigrum, L.	Lada Hitam.
P. ribesioides, Miq.	Kalong Ular. K. Gajah. Lada Rimba.
P. stylosum, Miq.	Kadok Hutan.
P. sp.	Akar Sangkap.
Piptospatha Ridleyi, Hk. f. (*Aroideæ*)	Salimpat.
Pistia stratoides, L. (*Aroideæ*).	Kambiang. Kiamban. Kiyambang (Favre).
Pisum sativum, L.	Kachang Putih.
Pithecolobium bubalinum, Benth. (*Leguminosæ*).	Giring Antan.
P. clypearia, Jack.	Jering Munyet.
P. contortum, Mast.	Asam Jawa Antan.
P. fasciculatum, Benth.	Jering Bali. Kachang Tupai, Saga Gajah.
P. lobatum, Benth.	Jering.
P. microcarpum, Bth.	Jering Tupai. Petai Belalang. Kurudus. Kerudas. K. Ayam. K. Api.
Pittosporum ferrugineum, Dryand. (*Pittosporeæ*).	Chabe Hantu (Penang). Bunga Sapong. Giramong (Jo-

	hore). Kapiala Pajan (Malacca). Lusai. Medang Kelelawak (Malacca). Suroras. Sereras (Malacca). Medang Pasir. Trangnok.
Plantago asiatica, L. (*Plantagineæ*).	Ekor Angin.
Plectocomia Griffithii, Hk. f. (*Palmeæ*).	Rotan Dahan. R. Tukus. Unak. Onak. Unar.
Pleopeltis angustata (*Filices*).	Hilan.
P. phymatodes, L.	Paku Wangi.
Pluchea indica, L. (*Compositæ*).	Beluntas.
Plumeria acutifolia, L. (*Apocynaceæ*).	Chempaka Biru, Kembaja (Favre).
Plukenetia corniculata, Sm. (*Euphorbiaceæ*).	Pina-Pina.
Plumbago rosea, L. (*Plumbagineæ*).	Cheraka (Singapore). Sitaka (Favre). Binasa (Favre).
Podocarpus neglectus, Bl. (*Coniferæ*).	Sentada. Setada.
Pogostemon Heyneanum, Hk. f. &. T. (*Labiatæ*).	Nilam Bukit.
P. Patchouli, Pell.	Nilam.
Pollia sorzogonensis, Endl. (*Commelinaceæ*).	Tampo Kalin. Tubo Keloi.
Polianthes tuberosa, L. (*Amaryllideæ*).	Sundal Malam.
Polyalthia Beccarii, King (*Anonaceæ*).	Ruseh.
P. Jenkinsii, Bth.	Mumpisang.
P. Scortechinii, King	Jankang Hutan. Kenanga Hutan.
P. spp.	Pepisang.
P. Teysmanii, King	Larak Merah.
Polygonum flaccidum, Meissn. (*Polygonaceæ*).	Kalina Paya. Kasum.

P. peduncularis, Wall.	Rumput Janggut Rimau. Rumput Kowah.
Polyosma mutabile, Bl. (*Saxifragaceæ*).	Tembosa Jantan. Poko Tupai.
P. sp.	Lara Batang (Pahang).
Polyporus sacer, L. (*Fungi*).	Susu Rimau.
Polystictus sanguineus (*Fungi*).	Chendawan Boreng. C. Merah.
P. xerampelinus	Chendawan Telinga Kra.
Pometia pinnata, Forst. (*Sapindaceæ*).	Kasai.
Pongamia glabra, Vent. (*Leguminosæ*).	Kachang Kayu Laut.
Popowia fœtida, Maing. (*Anonaceæ*).	Pisang-Pisang Besar.
P. nervifolia, Maing.	Mumpisang Batu. Pasak Achong.
Portulaca oleracea, L. (*Portulacaceæ*).	Gelang Pasir. Segan Jantan (Penang).
P. quadrifida, L.	Memaniran Putih (Favre).
Pothos Curtisii, Hk. f. (*Aroideæ*).	Dendendong.
P. latifolia, Hk. f.	Lidah Buaya.
Pothomorphe subpeltata, Miq. (*Piperaceæ*).	Sigumbar Urat.
Pouzolzia pentandra, Benn. (*Urticaceæ*).	Balam.
Pouzolzia indica, Gaud.	Aring-Aring; Urang Urang.
Premna cordifolia, Rox. (*Verbenaceæ*).	Ambong-Ambong Laut. Buas-Buas. Babuas. Bruas.
P. coriacea, C. B. C.	Akar Mulor Padang.
P. corymbosa, Roth.	Kanrian.
P. parasitica, Bl.	Akar Buas.
Prismatomeris albidiflora, Wight. (*Rubiaceæ*).	Langsit. (Penang).
Psidium guava, L. (*Myrtaceæ*).	Jambu Biji. J. Belawas. Melukat (Johore).

Psophocarpus tetragonolobus, (*Leguminosæ*).	Kachang Botol. K. Botor. Botor.
Psychotria angulata, Korth. (*Rubiaceæ*).	Jarum-Jarum Betina. Penawar Billah.
P. Jackii, Hook.	Ubat Halan.
P. Malayana, Jack.	Bayam Badak. Tulang-Tulalang.
P. ovoidea, Wall.	Akar Ambelu.
P. polycarpa, Miq.	Bertis. Akar Chinta Mula. A. Nasi-Nasi. A. Sulong. Silam Kulu.
P. sarmentosa, Bl.	A. Daldaru. A. Rambeh Padang.
P. stipulacea, Wall.	Julong-Julong Bukit.
P. sp.	Akar Gandarusa.
P. sp.	Penoh-Penoh Hutan. Akar Gandarusa.
P. sp.	Akar Sabuseh Putih (Malacca). Sambaran Angin.
Pternandra capitellata, Jack. (*Melastomaceæ*).	Kulit Nipis (Penang).
P. coerulescens, Jack.	Benut Paya. Bunyut Paya. Kelat Biru. Manaon. Sial Munahon.
P. spp.	Dalek. Delek. Delak.
Pterisanthes caudigera, Miq. (*Ampelideæ*).	Akar Gamat.
P. heterantha, Miq.	Akar Sebunkak.
Pterocarpus indica, Willd. (*Leguminoseæ*).	Sena. Angsena.
Pterospermum diversifolium, Bl. (*Sterculiaceæ*).	Bayur Jantan.
P. Jackianum, Wall.	Bayur.
Ptychopyxis costata, Miq. (*Euphorbiaceæ*).	Kaliah Toah. Mendarah.
Punica granatum, L. (*Lythraceæ*).	Buah Delima.
Pygeum acuminatum, Bl. (*Rosaceæ*).	Tampoi Dadah.

P. lanceolatum, Hk. f.	Merapit (Malacca).
P. sp.	Medang Chang Kauno. M. Chupona. M. Kelawar.
Pyrenaria acuminata, Bl. (*Ternstrœmiaceæ*).	Chumpahong. Gelugur Gajah. Medang Gelugur. Samak Jantan.
Quercus encleisocarpa, Korth. (*Cupuliferæ*).	Berangan Babi Hutan.
Q. hystrix, Korth.	Gugiring. Kampuning.
Q. oidocarpa, Korth.	Berangan Antan.
Q. spicata, L.	Berangan Padi. Empening. Pening.
Q. sps.	Berangan Babi.
Q. Kunstlerii, King	Kelempening. (Lankawi).
Quisqualis densiflora, Wall. (*Combretaceæ*).	Selimpas. Sumang.
Q. indica, L. ..	Akar Pontianak. A. Suloh
Rafflesia Arnoldii, Bl. (*Rafflesiaceæ*).	Kerubut.
Randia anisophylla, Jack. (*Rubiaceæ*).	Bungkal. Chempakah Putih Hutan. Jarum-Jarum Jantan. Medang Gajah. Mumpulu Rimbah.
R. densiflora, Benth.	Burumbong Jantan. Gading Tulang. Geruseh. Gereseh. G. Puteh. G. Jantan. Mata Ular. Merumbong Jantan. Musirah Mata Kerbau. Perawas.
R. fasciculata, De C.	Akar Bedarah Laut. A. Duri. A. Kukulang.
R. longiflora, Lam.	Siantan Hutan.
R. macrophylla, Bl.	Kachubong Rimbah. Kumatan. Pecha Pingan.
R. rugulosa, Thw.	Akar Suburus.
Raphidophora Lobbii, Hk. f. (*Aroideæ*).	Akar Asam Tebing Paya.
R. minor, Hk. f.	Akar Kelamoyiang.
Ratonia sp.	Pantat Ulat Putih.

Renanthera moschifera, Linal. (*Orchideæ*).	Bunga Kasturi.
Rhizophora conjugata, L. (*Rhizophoreæ*).	Akit.
R. mucronata, Lam.	Belukap.
Rhodamnia trinervia, Bl. (*Myrtaceæ*).	Empoyan. E. Batu. Mungkoyan Pinang. Rusa-Babi (Johore). Sedomang (Malacca).
R. trinervia, var. montana	Empoyan Bukit.
Rhodomyrtus tomentosa, Bl. (*Myrtaceæ*).	Kamunting. Kemunting.
Rhynchosperma Wallichiana, Kunth.	Bulang Rumput.
Ricinus communis, L. (*Euphorbiaceæ*).	Jarak.
Rosa centifolia, L. (*Rosaceæ*).	Bunga Mawar (The Rose).
Roucheria Griffithiana, Bl. (*Lineæ*).	Bhoi. Ipoh Akar Putih. Ipoh Putih Akar Biji. Garam-Garam. Kait-kait. Akar Kait Putih. Akar Musiang.
Roureopsis pubinervis (*Connaraceæ*).	Akar Kachang Betina. Akar Kaldee. A. Tukekel.
Rourea fulgens, Wall. (*Connaraceæ*).	Akar Asam. Asam Akar. Semilat. Sembilat. Semilat Darah. S. Putih.
R. rugosa, Bl.	Akar Kelintat Kra. Semilat-Semilat. Sembilat.
Rubus glomeratus, Bl. (*Rosaceæ*).	Akar Balik Adap. A. Bulan Mudu. Akar Kupor.
R. moluccanus, L.	Tempoh Ragat. (Pahang). Tempu Ranak (Malacca).
Ruellia repens, L. (*Acanthaceæ*).	Dras Malam. Akar Kurumak.
Ruta graveolens, L.	Aruda (Rue).
Ryparia fasciculata, King (*Bixineæ*).	Lumôs. Musukang Putih. Surumkop. Tajam Bulat.

R. sp.	Yu.
Saccharum arundinaceum, L. (*Gramineæ*).	Tebrau.
S. officinarum, L.	Tebu.
S. Ridleyi, Hk. f.	Tebrau (Pahang).
Salacia flavescens, Kz. (*Celastrineæ*).	Katimbong (Kedah). Sedang.
S. grandiflora, Kz.	Ampadal Ayam. Empedal Ayam.
S. sp.	Nasi Sejuk (Kedah).
Salix tetrasperma, Rox. (*Salicineæ*).	Dalu-Dalu. Jendalu. Dahu.
Sauropus albicans (*Euphorbiaceæ*).	Chekop Manis. Chermela Hutan. Tarok Manis.
Samadera indica, Gaertn. (*Simarubeæ*).	Epoh. (Johore).
Sandoricum dasyneurum, Baill. (*Meliaceæ*).	Kechapi Hutan.
S. indicum.	Sentol. Setui. (Lankawi).
S. radiatum, King	Kechapi. Kulapi.
Salomonia cantoniensis, L. (*Polygaleæ*).	Rumput Bua.
Santalum album, L. (*Santalaceæ*).	Chendana.
Santiria apiculata, Benn. (*Burseraceæ*).	Keranti Batu.
S. fasciculata, Benn.	Kadongdong Bulan Putih.
S. Griffithii, Engl.	Kempas Roman.
S. lævigata, Bl.	Kerantei. Keratei. K. Merah.
S. multiflora, Benn.	do. do.
Sapium baccatum, Rox. (*Euphorbiaceæ*)	Ludai. L. Pelandok. Rulus.
S. indicum, L.	Gurah. Guring.
Saprosma arboreum, Retz. (*Rubiaceæ*).	Chumpong. Kusimbo. Marabuloh Paya.
S. sp.	Daun Sekuntut.
Saraca cauliflora Bak. (*Leguminosæ*).	Gapis Kunyit. Talan Kunyit.

S. triandra, Bak.	Gapis. Talan.
Sarcanthus secundus, Griff. (*Orchideæ*).	Sakat Ular.
Sarcocephalus Junghuhnii, Miq. (*Rubiaceæ*).	Bongkah Ayer. Chermin Ayer. Lempedu Jawa. Melada (Pinang). Mempelu Tanah. Mungkal. Sebutah. Sebongkok Bukit.
S. subditus, Miq.	Magal. Markel. Sakir Damak (Johore). Subutu.
Sargassum sp. (*Algæ*).	Dandigum.
Scævola Koenigii, Vahl.	Ambong-Ambong. Ambun-Ambun. Buas-Buas Laut.
Schizæa dichotoma (*Filices*).	Paju Jarum.
Schoutenia Mastersi, King (*Tiliaceæ*).	Banitan Merah.
Schizostachyum aciculare, Gamble. (*Gramminceæ*).	Buluh Padi.
S. Blumii, Nees.	Buluh Juron.
S. chilianthum, Gamble	Akar Buluh.
S. Zollingerii, King	Buluh Tuloh.
Schima Noronhæ, Reinw. (*Ternstroemiaceæ*).	Medang Bekawi (Pinang).
Schizophyllum commune (*Fungi*)	Chendawan Sesak.
Scirpus grossus, Vahl. (*Cyperaceæ*).	Mendarong. Menerong. Rumput Murong. R. Musing.
S. mucronatus, L.	Rumput Kerchut. Kumbah.
S. supinus, L.	Rumput Perut Tikus.
Scirpodendron costatum, Thw. (*Cyperaceæ*).	Selensing.
Scindapsus hederaceæ, Schott. (*Aroideæ*).	Akar Lubang Alah.
S. pictus, Hassk.	Siri Chichewi. (P. Wellesley).
S. sp.	Akar Kelumpayang.

Scleroderma flavo-crocatum (*Fungus*).	Chendawan Tumbong Klapa.
Scleria oryzoides, Presl. (*Cyperaceæ*).	Rumput Liku Daun.
S. sps.	Rumput Sendarian.
S. sumatrensis, Retz.	Rumput Kumbar.
Scolopia rhinanthera, Clos. (*Bixineæ*).	Rukam Hutan.
Scoparia dulcis, L. (*Scrophularineæ*).	Bunga Baik Salam. Cha Padang. Te Macao Dulis.
Scorodocarpus borneensis, Becc. (*Olacineæ*).	Kulim.
Scyphiphora hydrophyllacea, Gaertn. (*Rubiaceæ*).	Chingum (Johore). Sabasoh. Sebasah.
Sebastiana chamoelea, Muell. (*Euphorbiaceæ*).	Amin-Amin.
Selaginella atroviridis (*Lycopodiaceæ*).	Jambol Merak.
Selliguea Feei, Hk. (*Filices*).	Paku Gala Hantu Laut.
Sesamum indicum, D. C. (*Scrophularineæ*).	Bijan. Lenga.
Sesbania grandiflora, Pers. (*Leguminosæ*).	Turi.
Sesuvium portulacastrum, L. (*Ficoideæ*).	Gelang Laut. Sesepit (Singapore).
Setaria glauca, Beauv. (*Gramineæ*).	Rumput Julong-Julong.
Shorea acuminata, Dyer (*Dipterocarpeæ*).	Meranti Paya. Rambeh Daun. Seraya Batu. (Maingay).
S. bracteolata, Dyer	Chingal.
S. barbata, Brandis	Resak.
S. Curtisii, Dyer	Meranti Tai.
S. glauca, King	Damar Laut Daun Besar.
S. macroptera, Dyer	Kepong. K. Hutan. K. Hantu.
S. parviflora, Dyer	Meranti Daun Kechil. Meranti Kerap. Seraya Samak.

S. utilis, King	Damar Laut No. Satu.
S. sp.	Temah (Lankawi).
Sida carpinifolia, L. (*Malviaceæ*).	Katumbar Hutan (Malacca). Kelulut Putih. Sada Turi. Telor Belangkas.
S. rhombifolia, L.	Bunga Padang. Seliguri Padang. Sendaguri.
Sideroxylon ferrugineum, Hk. (*Sapotaceæ*).	Tawak. Tuak-Tuak.
S. sp.	Chinta Mula Putih.
Sindora siamensis, Teys. (*Leguminosæ*).	Saputi.
S. sp.	Saputi Minyak.
S. Wallichii, Benth.	Saputi Sindo.
Sloetia sideroxylon, Teys. (*Urticaceæ*).	Tampinis. T. Merah T. Kerong. T. Putih T. Hitam are said to be slight varieties?
Smilax calophylla, Wall. (*Liliaceæ*).	Itah Tembaga (Perak) Sadawi.
S. China, L.	Gadung China. Ubat Rajah. Ubi Rajah (Java).
S. Helferii, A. de C.	Akar Bana. Gadong Tikus. Kijil. (Selangor). Kutona Betina. Akar Seminjo (Pahang).
S. leucophylla, Bl.	Kuranting Jantan.
S. megacarpa, D. C.	Kluna. Akar Lampan Bukit. Rabano.
S. myosotiflora, D. C.	Akar Ali. Itah Visi.
Solanum aculeatissimum, Jacq. (*Solanaceæ*).	Terong Asam Hutan. T. Blanda. T. Purat.
S. nigrum, L.	Terong Meranti (Kedah). T. Parachichit.
S. sarmentosum, Nees.	Terong Tikus.
S. torvum, Swartz.	Terong Pipit.
S. tuberosum, L.	Ubi Benggala. Kentang.
S. verbascifolium, L.	Terong Raya. T. Bulah. T. Pipit. T. Rimban. Sukasap.

Sonerila heterostemon, Naud. (*Melastomaceæ*).	Ati-Ati Gajah. Ati-Ati. Hutan. Kerakap Ayer.
S. moluccana, Jack.	Pouh (Jack).
S. sp.	Bubulus (Malacca). Bulu Ulat.
Sonneratia acida, L. (*Lythraceæ*).	Bedat. Bedata. Perupat.
S. Griffithii, Kz.	Gadabu.
Sorghum sacchariferum, L. (*Gramineæ*).	Betari. Batari.
Soya hispida, Benth (*Leguminosæ*).	Kachang Japun.
Sphenodesma barbata, Schawr. (*Verbenaceæ*).	Agalumut. Akor Chabang Lima. Lilimbo.
S. pentandra, Jack.	Akar Lintong Rusa. A. Sulang. A. Tanak Rimau.
S. triflora, Wight.	Akar Risa. A. Meruan. A. Memali.
Spathoglottis plicata (*Orchideæ*).	Lumbah.
Spatholobus ferrugineus, Benth. (*Leguminosæ*).	Akar Jangat. A. Sejangat. A. Sekoet.
Spermacoce hispida, L. (*Rubiaceæ*).	Rumput Setarro. R. Standang. R. Susor.
Sphæranthus microcephalus, D.C.	Gelumak Susu.
Spilanthes acmella, L. (*Compositæ*).	Gutang.
Spinifex squarrosa, Lab. (*Gramineæ*).	Rumput Lari-Lari.
Spondias mangifera, Willd. (*Anacordiaceæ*).	Kadongdong. Kandongdong. Dongdong.
Sporobolus diander, L. (*Gramineæ*).	Rumput Tule Belalang.
Stachytarpheta indica, L. (*Verbenaceæ*).	Selasih Dende. S. Hutan.
Stemona tuberosa (*Roxburghiaceæ*).	Ubi Kumili Hutan.
Stenochasma convolutum, Griff. (*Scitamineæ*).	Pua Hitam.

S. sps.	Tepus.
Stenochlæna palustris (*Filices*).	Lamiding. Miding. M. Betina. Paku Mesin. P. Mesah. P. Ramu. Sayur Paku.
Sterculia campanulata, Wall. (*Sterculiaceæ*).	Kluet. Kulunot.
S. Jackiana, Wall.	Bayur Betina.
S. lœvis, Jack.	Chempaka Janggi.
S. macrophylla, Vent.	Milian.
S. parviflora, Rox.	Kadampang, Rongga Jantan.
S. rubiginosa, Jack.	Dudanak Hitam. Kelunting, Saburu. Sakelat. Unting-Unting Besar.
S. scaphigera, Wall.	Kembang Samangko. Silayer (Selangor).
Stereum nitidulum (*Fungi*).	Chendawan Karang.
Stereospermum frimbiatum, D.C. (*Bignoniaceæ*).	Cha-Cha. Lumpoyan.
S. glandulosum, Miq.	Lempayan.
S. hypostictum, Miq.	Bunga Pawang.
Stephegyne speciosa, Miq.	Kutum (Pahang).
Streptocaulon Wallichii, W. & A. (*Asclepiadeæ*).	Sarapapat. Akar Timah Ketam.
Striga lutea, Lour. (*Scrophularineæ*)	Siku-Siku.
Strophanthus dichotomus, De. C. (*Apocynaceæ*).	Akar Dudok Kijang. A. Tandok-Tandok.
S. jackianus, Wall.	Bunga Hantu.
Strychnos laurina, Wall. (*Loganiaceæ*).	Akar Semijo.
S. pubescens, Clarke	Blay Besar.
S. Tieute, Bl.	Blay Hitam. Ipoh Akar.
S. sp.	Bedara Hutan. Akar Lada-Lada.
Styrax benzoin, L. (*Styraceæ*).	Keminiyan. Kumian. Kaminan. Kumeyan.
Susum anthelminticum, Bl. (*Flagellarieæ*).	Bakung Ayer. B. Pantal. B. Suasa. Bangkong. Lo-

	bak-Lobak. Lobak Jantan.
Swintonia Schwenkii, Teys. ... (*Anacardiaceæ*).	Balau Betina.
S. spicifera, Teys.	Mupus (Pinang).
Symplocos adenophylla, Wall. (*Styraceæ*).	Semugum.
S. fasciculatus, Zoll. ...	Jejuh. Lukot. Merpadi Paya.
S. ferrugineus, Rox.	Ganchil Kechil.
S. racemosa, Rox.	Marililin. Mempatu.
S. rigida, Clarke	Laga Egan (Johor).
S. rubiginosa, Wall.	Bantun.
S. sp.	Domun (Singapore).
Synadenium sp. ... ... (*Euphorbiaceæ*).	Sesudu Hutan (Pinang).
Syngramme alismæfolia, Hk. ... (*Filices*).	Paku Tunjok Sanget.
Tacca cristata, Jack. ... ... (*Taccaceæ*).	Kelemoyiang Ayer (Selangor). Sabiak. Sebiak.
T. pinnatifida, L.	Lukeh.
Tabernæmontana coronaria, Bl. (*Apocynaceæ*).	Bunga Susu. Manda Kaki (Malacca). Susun Kelapa.
T. corymbosa	Istong Parah. Restong. Jantang Badak. Jelutong Badak. Saratong (Johore).
T. malaccensis	Gurang. Laggundi Bulan. Lada-Lada Jantan. Lalada. Lelada Padi. L. Hutan. Perachet. Puding Hutan. Penyoi (S. Ujong) Poko Restong.
T. pedunculare, Wall. ...	Sejarang. Sujarong.
Tæniochlœna Griffithii, Hk f. (*Connaraceæ*).	Borombong (Akar). Akar China. Kachang Purai.
Tænites blechnoides, Swartz ... (*Filices*).	Paku Balu. B. Pijai.
Tamarindus indicus, L. ... (*Leguminosæ*).	Asam Jawa.
Tarrietia simplicifolia, Mast. ... (*Sterculiaceæ*).	Merbayu. Mumbaju Siku Keluang. Traling.

Tectona grandis, L. (*Verbenaceæ*).	Jati.
Terminalia catappa, L. (*Combretaceæ*).	Ketapang.
T. phellocarpa, King	Pelawei (Selangor). Mampalam Babi.
T. subspathulata, King	Jilawei.
Tephrosia Hookeriana, W & A. (*Leguminosæ*).	Kachang Buloh.
Ternstræmia pinangiana, Chois. (*Ternstræmiaceæ*).	Tengah Hutan.
T. coriacea	Buguas.
Tetracera assa, L. (*Dilleniaceæ*).	Mempelas. Ampalas. Ampelas.
T. macrophylla, Hk. f.	Ampalas Gajah. A. Rimau.
Tetractomia laurifolia, Bl. (*Rutaceæ*).	Kertak Hudang. Medang Hudang.
Teysmannia altifrons, Miq.	Daun Payong. (Pahang) Daun Segalor (Selangor). D. Selebar. Daun Sang (Kinta) C. C.
Thamnopteris nidus-avis, L. (*Filices*).	Paku Langsuir (Selangor). Rumah Langsuir. Paku Pandan.
Theallchinensis, L.	Te. Poko Cha (Pinang).
Thecostele maculosa, Ridl. (*Orchideæ*).	Sakat Bilimbi.
Thespesia populnea, L. (*Malvaceæ*).	Baru.
Thottea grandiflora, Rox. (*Aristolochiaceæ*).	Grobo (Malacca). Kurubut. Kerubut. Sambut. Seburat. Saburut. Suprut.
Thrixspermum lilacinum, Rchb-fil. (*Orchideæ*).	Akar Sesudu Paya.
Thunbergia alata, Rox. (*Acanthaceæ*).	Akar Ulan.
Thysanolena acarifera, Nees. (*Gramineæ*).	Buluh Tebrau.

Tinomiscium petiolare, Miers. (*Menispermaceæ*).	Akar Langkap. A. Lempoyang (S. Ujong). A. Mumbulu.
Timonius jambosella, Thw. (*Rubiaceæ*).	Merombong (Malacca). Rio (Johore). Tabah (S. Ujong) Kurau (Penang).
Torenia asiatica, L. (*Scrophularineæ*).	Kulalawat.
T. pedunculata, Benth.	Kelawat. Rulang Hutan.
T. polygonoides, Benth.	Kerak Merah. Terutop Batu.
Trema amboinensis, Bl. (*Urticaceæ*).	Mundarong. Narong Jantan. Narong Paya.
Trevesia sundaica, Miq. (*Araliaceæ*).	Kabu-Kabu. Kakabu. Tapak Rusa.
Trichoranthes anguina, L. (*Cucurbitaceæ*).	Ketola Ular.
T. celebica, Miq.	Akar Tiga Chabang (Selangor). Timun Dendang Lunjung.
T. cordata, Rox.	Akar Labu Ayer Hutan. Akar Sunto. A. Lokar.
T. tricuspidata	Akar Katominan (Penang).
T. Wallichianum, Cogn.	Timun Gajak. Akar Balistur.
T. Wawraii, Cogn.	Akar Tiga Chabang.
Tridax procumbens, L. (*Compositæ*).	Rumput Kanching Baju.
Trichospermum Kurzii, King (*Tiliaceæ*).	Kasumba Bukit.
Trigonella Fenugrœcum	Alba.
Trigonochlamys Griffithii, Hk. f. (*Burseraceæ*).	Babi Kurus. Damar Kijai. Kijai. Kasir. Kadongdong Mata Hari.
T. sps.	Kadengdong. Kadongdong.
Trigonostemon indicus (*Euphorbiaceæ*).	Gadu Gajah. Pelandok Besar. Selendap Bukit.
T. sp.	Mantua Pelandok Jantan.
Trigoniastrum hypoleucum, Miq. (*Polygaleæ*).	Maharajili (Johore). Mata Passeh (Maingay).

Triumfetta rhomboidea Jacq. (*Tiliaceæ*).	Champadang.
Tristania Maingayii, Duthie. (*Myrtaceæ*).	Pasir Lingga.
T. Wightiana, Griff.	Pelawan. Changal.
Triphasia trifoliata, De. C. (*Rutaceæ*).	Limau Keah. L. Kikit. L. Kaya.
Turpinia pomifera, De C. (*Sapindaceæ*).	Merbong Jantan.
Turnera ulmifolia (*Turneraceæ*).	Lidah Kuching.
Typhonium divaricatum, Decne. (*Aroideæ*).	Birah Kechil.
Tylophora asthmatica, Wight. (*Asclepiadeæ*).	Sambukan.
T. tenuis, Wall.	Akar Saput Tungal.
T. Wallichii, Hk. f.	Akar Subidai.
Uncaria ferrea, De C. (*Rubiaceæ*).	Kait-Kait Bukit. Kait-Kait Merah.
U. gambir, Hunter	Gambir. Gatta Gambir.
U. lanosa, Wall.	Gegambir Paya. G. Hutan.
U. pteropoda, Miq.	Kait-Kait Darat (Malacca).
U. sclerophylla, Rox.	Belalai Gajah. Akar Selimbar (Favre).
U. spp.	Kait-Kait.
Unona dasmychala, Bl. (*Anonaceæ*).	Chenang Hutan (Malacca).
U. discolor, Vahl.	Akar Darah. A. Kenanga Hutan.
U. dumosa, Rox.	Akar Kenchong Johu.
U. longiflora, Rox.	Jari Ayam.
Uraria crinita, Desv. (*Leguminosæ*).	Ekor Kuching. Seringan. Pua Acoraging (Johor).
Urceola brachysepala, Hk. f. (*Apocynaceæ*).	Gegrip Putih.
U. elastica, Rox.	Gegrip Tembaga.
U. lucida, Benth.	Gegrip Merah. G. Nasi.
U. malaccensis, Hk. f.	Akar Sangkang Buaya. A. Serapat Jantan.

U. torulosa, Hk. f.	Akar Montek. A. Suapah.
Urena lobata, L. (*Malvaceæ*).	Poko Kelulut. Perpulut. Pepulut. Pulut-Pulut.
Urophyllum Blumeanum, Wight. (*Rubiaceæ*).	Chemperai Dadis.
U. Griffithianum, Wight.	Limputih Paya.
U. hirsutum, Wight.	Panchan (Malacca).
U. sps.	Jinteh Putih. Mata Keli Para.
Utricularia flexuosa, Vahl. (*Lentibularieæ.*)	Lumut Ekor Kuning.
Uvaria dulcis, Dunal. (*Anonaceæ*).	Pisang-Pisang Hitam.
U. dumosa, Rox.	Pisang-Pisang Padi. P. P. Pipit.
U. purpurea, Bl.	Pisang-Pisang Jantan. P.-P. Kuming. P.-P. Tandok.
Vaccinium malaccense, Wight. (*Vaccinieæ*).	Kelempadang.
Vandellia crustacea, Benth. (*Scrophularineæ*).	Kerak Nasi.
Vanda gigantea, Lindl. (*Orchideæ*).	Kayu Low (Lankawi) Pisang Kling (Lankawi) Low Kayu.
Vanilla Griffithii, Reich. (*Orchideæ*).	Akar Penubal. Telinah Kerbau Bukit.
Vatica Curtisii, King. (*Dipterocarpeæ*).	Pinang Baik (Penang).
V. pallida, Dyer.	Merambong Bukit Besar.
Vernonia arborea, L. (*Compositæ*).	Jankang Paya. Mengabong. Medang Gambong. Merombong Bukit.
V. Chinensis, Less.	Rukum Gajah.
V. Cinerea, Less.	Bujong Samalam. Ekor Kuda. Rumput Sapagi. Sembong Hutan. Rumput Susor Daun. Tahi Babi. Tambak Bukit. Tambak-Tambak.
V. scandens, De C.	Akar Lumboh (Malacca).

V. sp.	Ragin.
Vitis adnata, Wall. (*Ampelideæ*).	Chawat Udi. Akar Pakan Paya.
V. cinnamomea, Wall.	Akar Jari Biawak. Keladek Ingan. Susuwat.
V. diffusa, Miq.	Chiarek Merah. Lakom Laut. L. Jang-Jang. L. Umbon. Akar Mumpayang.
V. elegans, Kurz.	Akar Plas (Johore).
V. gracilis, Wall.	Keladek Tana.
V. glaberrima Wall.	Akar Asam Riang. A. Riang-Riang.
V. lanceolaria, Rox.	Akar Kangkong Gajah.
V. macrostachys, Miq.	Akar Charek-Charek. A. Sakariah.
V. mollissima, Wall.	Lakom Gajah. Akar Sebunkah. Peria Hutan.
V. novemfolia, Wall.	Lakom Terbau.
V. quadrangularis, Wall.	Salah Laku.
V. sps.	Lakom. Ati-Ati.
V. sp.	Akar Koyah Asam.
Vitex coriacea, Clarke (*Verbenaceæ*).	Jali Batu. Medang Pupoi (Malacca).
V. pubescens, Vahl.	Leban. L. Hitam. L. Tandok.
V. sp.	Leban Kunyit.
V. trifolia, L.	Lagundi. Legundi. Lenggundi. Langgundi. Langgudi.
V. vestita, Wall.	Alban. Halban. Bangus Jantan. Leban Bunga. L. Nasi-Nasi. Nasi Remba. Sepit. Sipet.
Viscum spp. (*Loranthaceæ*).	Api-Api.
Viburnum sambucinum, Rein. (*Caprifoliaceæ*).	Buas-Buas Bukit. Buas-Buas Paya.
Vigna catiang, Endl. (*Leguminosæ*).	Kachang Merah. K. Perut Ayam. K. Puru Ayam. K. Towchew. K. Panjang.

Ventilago leiocarpa, Benth. (*Rhamneæ*).	Akar Hitam. A. Tukus.
V. Maingayii, Laws.	Kamayan Antan (Pahang). Kutapek.
Voandzeia subterranea, Thouars. (*Leguminosæ*).	Kachang Manilla.
Walsura multijuga, King (*Meliaceæ*).	Laka-Laka Jantan.
Webera grandiflora, Hk. f. (*Rubiaceæ*).	Julong-Julong Jantan.
W. longifolia, Hk. f.	Kulu Babi. Sigauri.
W. mollis	Injau Belukar. Kelabu.
W. stellata, Hk. f.	Kuruseh Putih. Suluro.
Wedelia biflora, De C. (*Compositæ*).	Sarune. Saruney (Favre). Serenah Laut. Sunai Laut.
Wikstrœmia Candolleana, Meisn. (*Thymeleaceæ*).	Chandan (Pahang).
Willughbeia coriacea, Wall. (*Apocynaceæ*).	Getah Gaharu. G. Ujol. G. Menjawa (Malacca). Ujol. Puchong Kapor.
W. firma, Bl.	Gegrip Hitam. G. Besi. Akar Sampat.
Wornica meliosmœfolia, King (*Dilleniaceæ*)	Simpoh Jantan. S. Bukit. S. Hutan.
W. oblonga, Wall.	Kambai Hutan.
W. pulchella, Jack.	Simpoh Paya.
Xanthium strumarium, L. (*Compositæ*).	Buah Anjang.
Xanthophyllum affine, Korth. (*Polygaleæ*).	Chubon. Gading Jantan. Limah Beruk Jantan.
X. Griffithii	Dudoli Paya.
X. Kunstleri, King	Boborek. Limah Beruk Putih. Minyak Beruk.
X. Maingayii, Hk. f.	Limah Beruk Betina.
X. obscurum, Benn.	Buah Kapas.
X. palembanicum, Miq.	Minyak Beruk.
X. rufum, Benn.	Kapas Bulan. Krabu. Medang Katanahan. Minyak Beruk Jantan.

X. Wrayii, King	Medang Surupo.
X. sps.	Limah Beruk. Lamah. Lumah. Minyak Beruk.
Xerospermum Norohnianum, Bl. (*Sapindaceæ*).	Rambutan Pachat.
X. Wallichianum, King	Balong Ayam.
Ximenia americana, L. (*Olacineæ*).	Bidara Laut.
Xylopia elliptica, Maingay (*Anonaceæ*).	Lilan.
X. ferruginea, Hk. f.	Jankang. J. Paya. J. Betina. J. Merah.
X. magna, Maingay	Kudago Hutan.
X. malayana, Maingay	Banit Kijang.
Xyris indica, L. (*Xyrideæ*).	Baghao. Jeringu Padang.
Zalacca affinis, Griff. (*Palmeæ*).	Salak Betul.
Z. conferta, Bl.	Asam Kelubi. A. Paya. Kelubi.
Z. edulis, B.	Salak.
Z. macrostachya, Griff.	Salak Rungum.
Z. Wallichianum, Mart.	Kumbak.
Zanthoxylum myriacanthum, Wall. (*Rutaceæ*).	Kabu-Kabu Hutan. Membuloh.
Zea mays, L. (*Gramineæ*).	Jagon.
Zingiber cassumunar (*Scitamineæ*).	Bunglei, Lampayang. Lempoyang.
Z. Griffithii, Baker	Boila Hitam.
Z. officinalis, L.	Aliya. Haliya.
Z. spectabilis, Griff.	Chadak (Selangor). Tupoi (Pinang).
Zizyphus calophylla, Wall. (*Rhamneæ*).	Dawai-Dawai. Dedawi. Akar Jambu Kelawar. Onak (Malacca). A. Pialu. A. Unak.
Z. jujuba, Lam.	Bedara China.

Z. oenoplia, Mills.	Kuku Balam. K. Tupai. Kukulang.

Silk and Cotton Dyeing by Malays.

BY W. W. SKEAT.

In Kelantan and Patani the material of which *sarongs*, *kain lepas*, etc., are made is now almost invariably silk or cotton thread imported from Singapore, but in out-of-the-way inland districts a few Malays of the older generation still manufacture a coarse but durable thread of native vegetable fibre (home-spun). In the latter case the dyes most commonly used were blue (biru) and purple (umu) with occasionally some green (ĭjau or ĕmpo) and a little yellow (kuning or tūla). Red, though much admired, was not commonly used owing to the difficulty of making it fast. When silk is to be dyed, from four or ten *kati's* weight is now usually bought from peddlers or in the bazaar at from \$4 to \$4.50 per *kati* ($1\frac{1}{3}$lbs). The following are the processes by which the required colours are obtained, both silk and cotton thread being similarly treated. I may add that the numbers correspond to a series of standard colours which were shown to my informants when the information was obtained, but which it is unfortunately impossible to reproduce here.

Red:—(1) To dye a *kati* of silk red from ten to fifteen fruits of the *asam gelugor*,* with two or three common tamarinds, and as much alum as will cover the nail of the fourth finger, are together put into a pan (blanga), and heated up to boiling-point (sāpā bĕrgĕlĕgåk).† The silk is plunged into the liquid, which is kept on the fire till the whole has been well boiled, when the pan is taken off and allowed to stand all night. Next morning the silk is kneaded to clean it (di-kichåh, Selangor kinchah) taken out, and dried in the sun, and put out in the dew for the night. This method of dyeing silk red is called by Patani and Kelantan Malays "chĕlu mala" (or, in standard Malay, "chĕlup malau.")

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* *Garcinia atroviridis,—H. N. R.*

† I have given exact Kelantan and Patani pronunciations in this article as likely to be of most interest to the reader,—*W. S.*

Orange:—(2) To dye silk orange [which is called kuning pinæ masåk, or "ripe betel-nut yellow"], the silk may be dipped into the already used red dye. Only a weak solution is required, so that if the strength of the dye (*pati*) has been absorbed by the first instalment of silk it does not really matter. Of course if a new solution is brewed, care must be taken to see that it is not too strong, but the former method is generally favoured. The silk is dipped into the liquid and stirred about, and then boiled a little, till it is as red as the *pulut-pulut* flower,* my informant declared. On being taken out again, the dye is wrung out of it, when it is laid aside for the time being. About a "chupåk" of the fruits of the kasōmå klin (*kasumba kling*) are then squeezed (*ramah*) into a dish *(pasu)*, the husks being thrown away. To these are added about ten of the fruits of *belimbing masam*, which is also called "Buåh k'rih" in Kelantan and Patani from its being used for the express purpose of cleaning K'ris blades (di-bachæ k'rih). These being squeezed into the *pasu*, a pinch or two of alum is added, (as a mordant), and the mixture is ready. The silk is dipped into this liquid and kneaded in it for a few moments (sa-jĕnih), after which it is boiled for a short while on the fire. When taken out, it is hung up upon a line in a shady place to dry (di-sidā di-tĕdoh).† Shade is of importance, as if it is exposed to the sun the colour will fade. It is however exposed to the dew (di-pĕrĕmbong) every night for three nights consecutively.

Dark orange is obtained from chips of the heart of the jackfruit (*nangka*) tree, with the usual mordant (alum and *asam gelugor*).

Yellow:—(3) and all the colours now to be mentioned are now usually obtained from aniline dye-stuffs imported from Singapore. In the absence of such dyes however they are still obtained as follows.

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* *Urena lobata* whose flower is pink.—*H. N. R.*

† In Selangor Malay = Sindal.

To dye silk *yellow*, turmeric or curcuma is pounded in a small specially-made mortar and wrung or squeezed by hand (di-p'råh) to get the juice out of it. Tamarinds, asam gĕlugor, and alum are added in the same proportion as before, and the silk boiled in the mixture and hung up to dry, as in the "malau" process. This dye however like all other shades of yellow must be exposed to the action of the sun, as without this the required tint cannot be obtained.

For *yellow green* (4) the treatment commences with the same process as for yellow, but a mixture is added which is made from the root and heart of the "poko' kĕdræ̃." About a kati (1⅓ ℔s) of this wood is taken, chopped up small (di-chichæ̃) and heated to boiling point. It is then allowed to stand and cool a little, when the clearer liquor at the top *(siring)* is spooned off (leaving the thicker stuff, called *dodo'* at the bottom), and added to the decoction of turmeric before referred to. The rest of the process is the same as before. The same colour is also given by young shoots of the Rambutan (*Nephelium lappaceum*) tree, alum and asam gĕlugor being added.

For *Green* (5) a larger proportion of the "kedrang" mixture is applied. For *Blue Green* (6) the process is twice repeated. For *Blue* (7) a decoction of indigo leaves takes the place of the turmeric. The process is otherwise the same but repeated two or three times till the right tint is obtained.

The following are the more important kinds of indigo known in Kelantan and Patani.

1. tarung kĕchi' (= tarum kechil)
2. tarung gĕlæ̃ngæ̃ (= t. gelanggang)
3. tarung Siæ̃ (= t. Siam)
4. tarung ākā or tarung utæ.* (= t. akar or t. eitan).

For *Indigo* (8) the leaves are gathered and thrown into a big earthenware jar called "tĕpayæ" (St. Mal. tĕmpayan) together with the bark of the young shoots or young fruit-spikes of the coconut-palm (kūli'pūti'nyå), one fruit-spike on an average going to each tepayæ̃. A lump of lime "as thick as a man's arm" (bĕsā lengæ̃) is added, and the silk steeped in the decoction till it becomes of the requisite tint.

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* *Marsdenia tinctoria* (?)—*H. N. R.*

For *Violet* (9) commence with the light red dye (mālā), as before, but then steep the silk in fermented cocoanut milk (ayï nyå 'dåh jadi ragi) keeping the silk in it only just long enough to turn it of the requisite tinge, as if not watched, and allowed to remain too long, it will turn a rusty black.

Purple (10) may be obtained either from an infusion of tengar bark or by combination of the "mala" (light red) dyeing process with indigo; Dark purple from the sĕrā kayu (Sel. *kenundang*), a tree with small red edible fruits, with alum and asam gĕlugor as usual. *White* (11) is obtained by steeping the silk in a decoction of (burnt) durian skin. Light black or *Black* (12) is obtained from an infusion of tengar bark or by repeated steepings in indigo; or by burying in the soil of the *gurah* tree,* yarn already dyed yellow-green (4) or dark purple (10). *Dark black* (13) by still further repeated dyeing with indigo or fermented coconut milk; *Grey* (14, 15) by dipping in indigo; *Brown* (16, 17) by dyeing with "mundu" † bark, alum and tamarinds being added as required; *Brown* (18) by dyeing with "mundu" bark *only*; and *Brown* (19) by adding indigo to the above.

I may add that the most generally favourite colour is red after which come yellow and a kind of delicate rose-colour (or madder), which is called kĕmbang pĕtang in Selangor (kĕmæ̃ pĕtæ̃ in Kelantan and Patani). Darker and soberer tints are in vogue for the older folks, and the sarong-patterns worn by the women have smaller checks and are more tasteful than those worn by the men.

In Raman (an inland province of Patani), both Blue and Black dyes are obtained from either the wild or cultivated variety of indigo (tarung utæ̃ or tarung kāpon) the yarn being steeped in an infusion coloured by the young shoots until the requisite tint is obtained. The black is therefore merely the deepest shade of blue obtainable. Red is obtained from Brazil-wood or *sepang* mixed with an equal proportion of chips of the

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* The yarn after dyeing is buried in soil taken from underneath the *gurah* tree, whose leaves are said to turn the soil underneath it black. The "gurah" tree is probably "Excœcaria agallocha," (H. N. R.) in which case it is the same as the *guring* (?).

† *Garcinia dulcis.—H. N. R.*

"kĕdræ̃ng" tree. The heart of the tree (tĕrah) is taken and steeped in water until the infusion becomes of a sufficently deep red colour. Green is obtained by taking the old leaves of the Indigo and mixing them with the juice of young cocoanut-fruit pounded small (*ayer mumbang* di-tumboh*).

Yellow† is obtained from equal proportions of turmeric (*kunyit*) and lime (*kapor*) which are mixed and allowed to ferment (*di-rapai jadi ragi*).

Purple is made by dipping red-dyed yarn in indigo.

Before concluding I may perhaps here add for the sake of comparison a few general notes on typical dyeing processes on the west coast (Selangor).

In Selangor mangrove bark (*kulit bakau*) is used as a black dye, whilst from *isi tĕmu kunyit* or *tĕmu kunchi* and *tĕmu pauh* (especially from the first of these three) yellow dye is obtained. The yellow dye obtained from these latter preparations is darkened by the addition of lime (*kapor*) and asam gĕlugor.

Red dye is obtained from Sepang and kĕsumba k'ling: green from bunga tĕlang (the creeper, not the bamboo); black from the fruit of the kĕdudok (*Melastoma*) and from the fruit of the tumu, the latter giving the best results.

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* In Raman called gūmæ̃ (=*gumbang*).

† Probably the exact colour obtained would depend upon the length of the immersion. It might be expected that such a mixture as described would produce, when its full strength was brought out, a sort of burnt ochre.

Malay Tiger-beetles.

By H. N. Ridley.

The tiger beetles (Cicindelidæ) are among the most attractive and conspicuous of our smaller beetles on account both of their bright colours, and their rapid movements in the full sun, in the hottest time of the day. They are exclusively carnivorous, chasing their prey consisting of smaller insects and usually flying very briskly, and usually require the use of the net to capture them. The Malay species may be divided into two groups, the jungle-tiger beetles and the road-tiger beetles. The former include species of the genera *Tricondyla* and *Collyris.*

Tricondyla aptera, Oliv., is the only species of this genus I have seen in the peninsula, and it is by no means common. I obtained a single specimen in the Botanic Gardens in Singapore. and there is also a specimen from Penang in the British Museum. It seems to be abundant in New Guinea and occurs also in Amboina, Aru Islands and Solomon Islands. It is our largest species, about ¾ inch long, and is also remarkable for being quite wingless, a narrow, elongate, deep blue beetle with slender antennæ, prominent eyes, and long red legs. I found it running about on the ground with the workers of the common large ant known as Semut Rajah, (*Camponotus gigas*). This ant makes nests in the bases of hollow trees, and the workers are commonly to be seen scampering about on paths, especially in the early morning and late evening, in search of food. The Tricondyla appears to mimick the ant, for though when the two insects are compared the resemblance is less striking, the general form, long legs, and method of running about cause the beetle to so much resemble the ant that I very nearly let it escape mistaking it for the ant.

Of the genus *Collyris* we have three species here and probably more will be found, as the species very closely resemble one another. They are much smaller than the *Tricondyla* but of very much the same shape, though they have wings, slender long-legged beetles, blue or violet, which are often to be seen flying and scampering over leaves on bushes in the bright sunny spots of the jungle. The commonest species is *C. dolens*, Chand., which I have collected in Singapore, Selangor, Penang and elsewhere. *C. filiformis*, Chand., is a more slender species, bright violet blue with red legs. *C. apicalis*, Chand., is rather larger, very dark in colour, almost black, with red legs and a reddish patch at the apex of the elytra. It is common in the Botanic Gardens.

Therates humeralis has broader elytra and more resembles a road tiger-beetle. It is blue with tawny shoulders and red legs. I have collected it in Singapore.

Of the road tiger-beetles with broad elytra, which dart about on sandy roads, taking short flights, then running a little on their long legs and off again, we have two genera, *Cicindela* and *Heptadonta.* The first genus seems to be very widely distributed, abundant in Europe and North America as well as in the tropics. The larvæ of the temperate climate species are soft bodied with large heads and powerful jaws. They live in holes in the ground from the entrance of which they look out for passing insects on which to prey. The larvæ of our species doubtless resemble those of colder climates, but they have not yet been investigated.

The commonest species is *Cicindela aurulenta*, Fabr., which is very abundant on sandy roads in Singapore, Perak, Penang, Province Wellesley and elsewhere. It is abundant on the west Hill in Penang at an altitude of 3000 feet. The upper surface is of a dark blue green with six golden spots on the elytra. The abdomen beneath is coppery red. It has very powerful black curved jaws, but cannot bite though the skin. Altogether it is a very beautiful beetle.

C. fuliginosa, Dej., is smaller and rather less common, though by no means rare. The elytra have a dark brown key pattern on a cream ground. I have met with it in Singapore, Penang, Province Wellesley and Perak, and it will probably be found all over the peninsula as well.

Heptadonta analis, Fabr., has the same form and habits as the two Cicindelas, but is a plain dark blue-green beetle without any spots. It is widely distributed, occurring in Penang, Selangor and Perak and is also found in Bombay, Java and Sumatra.

I identified these beetles by the collections in the Natural History Museum. There are probably other species to be found in the peninsula, especially in our hill regions, and as they are conspicuous and easy to catch there ought to be no difficulty in getting a complete set of the species of the peninsula.

A List of the Reptiles of Borneo—Addenda et Corrigenda.*

P. 47.—*Brookeia baileyi*, Bartlett.

This species must now be known as *Orlitia borneensis*, Gray. *O. borneensis* was most incompletely described in 1873, from a very young mounted specimen, collected by Bleeker at Sintang, Dutch Borneo. Boulenger subsequently relegated the species to the genus *Bellia*, since the very immature specimens showed no characters on which to base a sound generic diagnosis. Adult specimens of this same species were later (1895 and 1897) described by Bartlett and Boulenger as *Brookeia baileyi* and *Liemys inornata* respectively. A skull of this tortoise in the Zoological Institute, Munich, was described by Baur in 1895 as *Adelochelys crassa* and referred to the super-family *Chelydroidea*, chiefly characteristic of the New World, and its habitat guessed at as Costa Rica! Finally Schenkel in 1901 suggested that *Brookeia baileyi* and *Bellia borneensis* were conspecific, and pointing out the differences between this species and a typical Bellia, revived Gray's Genus Orlitia. I had already pointed out to Mr. Boulenger the identity of his *Liemys inornata* with *Brookeia baileyi*, and recently was able to obtain, through the kindness of Mr. Bailey, of the Sarawak service, a young specimen of this oft-described tortoise; Mr. Boulenger has compared this with the type of *Orlitia borneensis*, itself a young specimen, and in a letter he informs me that the two are identical. The head and entoplastron alone shew that the species is not a *Bellia*, but must occupy a genus by itself, for which the name *Orlitia* has already been provided.

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* See this Journal No. 35, pp. 43-68, 1901.

The species also occurs in Sumatra.

The following is a list of the literature relating to the species :—

Orlitia borneensis, Gray, A. M. N. H. (4) xi, p. 157, 1873.

Bellia borneensis, Boulenger, Cat. Chelonians, Brit. Mus., p. 100, (1889).

Hardella baileyi, Bartlett, Sarawak Gazette, Vol. xxv, p. 83, 1895, and Zoolog. Note Book of Sarawak, No. 1, p. 60, 1895.

Brookeia baileyi, Bartlett, Sarawak Gazette, Vol. xxvii, p. 113, 1896, and Zool. N. B. of Sarawak, No. 2, p. 81, 1896.

Adelochelys crassa, Baur, Anat. Anz., xii, 1896, p 314.

Liemys inornata, Boulenger, A. M. N. H. (5), Vol. 19, p. 868-469, 1897.

Liemys inenata, Siebenrock, Sitzb. Ak. Wien., cvi, 1, 1897, p. 248.

Orlitia (Bellia) borneensis, Shenckel, Verh. Nat. Ges. Basel, xiii, 1901, p. 196.

P. 47.—*Bellia borneensis*, Gray. Omit (see above).

P. 50.—*Tarentola delalandii*, D. & B.

This species should not be included in the Bornean fauna. Its habitat is West Africa and Madeira.

P. 54.—*Lygosoma whiteheadi*, Mocq.

This is conspecific with *L. bowringii*, Günth.

P. 58.—Add Mt. Saribau, Samarahan R. as another locality for *Opisthotropis typica*, Mocq., and *Hydrablabes periops*, Günth.

P. 58.—*Xylophis albonuchalis*, Günth.

This species, which was included by Günther in the genus *Geophis*, has been referred by Boulenger (Zool. Record, 1898) to *Agrophis*, next to *Idiopholis* (see p. 61).

P. 61—After *Agrophis albonuchalis*, Günth, add :—

Agrophis saravacensis, Shelford. Shelford A. M. N. H. (7), Vol. viii, p. 516, 1901. S. M. Kuching, (Shelford).

Type and only known specimen in the Sarawak Museum.

After *Idiopholis collaris*, Mocq. add :—

Idiopholis everetti, Shelford, l. c. p. 517, 1901.

Sawa, N. Borneo (A. Everett) cf. The unique specimen is preserved in the British Museum.

P. 62.—For *Calamaria prakii* read *Calamaria prakkii.*

P. 63.—For *Perraca* read *Perracca.*

R. Shelford.

RULES

OF THE

STRAITS ASIATIC SOCIETY.

I.—Name and Objects.

1.—The name of the Society shall be "THE STRAITS ASIATIC SOCIETY."

2.—The objects of the Society shall be—

a. The investigation of subjects connected with the Straits of Malacca and the neighbouring Countries.

b. The publication of papers in a Journal.

c. The formation of a Library of books bearing on the objects of the Society.

II.—Membership.

3.—Members shall be classed as Ordinary and Honorary.

4.—Ordinary Members shall pay an annual subscription of $5, payable in advance on the 1st January of each year. Members shall be allowed to compound for life membership of the Society on payment of $50.

5.—Honorary Members shall pay no subscription.

6.—On or about the 30th June of every year, the Honorary Treasurer shall prepare a list of those Members whose subscriptions for the current year remain unpaid, and such persons shall be deemed to have resigned their Membership. But the operation of this rule, in any particular case, may be suspended by a vote of the Council of the Society. No member shall receive a copy of the Journal or other publications of the Society until his subscription for the current year has been paid.

7.—Candidates for admission as Members shall be proposed by one and seconded by another member of the Society, and if agreed to by a majority of the Council shall be deemed to be duly elected.

8.—Honorary Members must be proposed for election by the Council at a general meeting of the Society.

III.—Officers.

9.—The Officers of the Society shall be:—

A President;
Two Vice-Presidents, one of whom shall be selected from amongst the members resident in Penang;
An Honorary Secretary and Librarian;
An Honorary Treasurer; and
Five Councillors.

These Officers shall hold office until their successors are chosen.

10.—Vacancies in the above offices shall be filled for the current year by a vote of the remaining Officers.

IV.—Council.

11.—The Council of the Society shall be composed of the Officers for the current year, and its duties shall be:—

a. To administer the affairs, property and trusts of the Society.
b. To elect ordinary members and recommend Honorary members for election by the Society.
c. To decide on the eligibility of papers to be read before general meetings.
d. To select papers for publication in the Journal, and to supervise the printing and distribution of the said Journal.
e. To select and purchase books for the Library.
f. To accept or decline donations on behalf of the Society.
g. To present to the Annual Meeting at the expiration of their term of office a Report of the proceedings and condition of the Society.

12.—The Council shall meet for the transaction of business once a month, or oftener if necessary. At Council meetings three Officers shall constitute a quorum.

13.—The Council shall have authority, subject to confirmation by a general meeting, to make and enforce such by-laws and regulations for the proper conduct of the Society's affairs as may, from time to time, be expedient.

V.—Meetings.

14.—The Annual General Meeting shall be held in January of each year.

15.—General Meetings shall be held, when practicable, once in every month, and oftener if expedient, at such hour as the Council may appoint.

16.—At Ordinary General Meetings of the Society seven and at the Annual General Meeting eleven members shall form a quorum for the transaction of business.

17.—At all Meetings, the Chairman shall, in case of an equality of votes, be entitled to a casting vote in addition to his own.

18.—At the Annual General Meeting, the Council shall present a Report for the preceding year, and the Treasurer shall render an account of the financial condition of the Society. Officers for the current year shall also be chosen.

19.—The work of Ordinary General Meetings shall be the transaction of routine business, the reading of papers approved by the Council, and the discussion of topics connected with the general objects of the Society.

20.—Notice of the subjects intended to be introduced for discussion by any member of the Society should be handed in to the Secretary before the Meeting.

Visitors may be admitted to the Meetings of the Society, but no one who is not a member shall be allowed to address the Meeting, except by invitation or permission of the Chairman.

VI.—Publications of the Society.

21.—A Journal shall be published, when practicable, every six months, under the supervision of the Council. It shall comprise a selection of the papers read before the Society, the Report of the Council and Treasurer, and such other matter as the Council may deem it expedient to publish.

22.—Every member of the Society shall be entitled to one copy of the Journal, deliverable at the place of publication. The Council shall have power to present copies to other Societies and to distinguished individuals, and the remaining copies shall be sold at such prices as the Council shall, from time to time, direct.

23.—Twenty-four copies of each paper published in the Journal shall be placed at the disposal of the Author.

24.—The Council shall have power to sanction the publication, in a separate form, of papers or documents laid before the Society, if in their opinion practicable and expedient.

VII.—Popular Lectures.

25.—Occasional Popular Lectures upon literary or scientific subjects may be delivered, under the sanction of the Council, on evenings other than those appointed for General Meetings of the Society.

VIII.—Amendments.

26.—Amendments to these Rules must be proposed in writing to the Council, who shall, after notice given, lay them before a General Meeting of the Society. A Committee of Resident Members shall thereupon be appointed, in conjunction with the Council, to report on the proposed Amendments to the General Meeting next ensuing, when a decision may be taken, provided that any amendment to the Rules which is to be proposed by such Committee to the General Meeting shall be stated in the notice summoning the meeting.

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